

A STUDY OF CREDIT-BASED INSURANCE SCORING  
FOR MOTOR VEHICLE INSURANCE

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IMPACT AND LIMITATIONS

MICHAEL S. PIECIAK, COMMISSIONER  
VERMONT DEPARTMENT OF FINANCIAL REGULATION

DECEMBER 15, 2016



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December 15, 2016

Vermont State Legislature  
115 State St.  
Montpelier, VT 05633-5301

Re: Credit-based Insurance Scoring for Motor Vehicle Insurance

Dear Vermont Legislators:

This past summer and fall Department staff members worked diligently to prepare the study we submit today in accordance with Acts of 2016, No. 147 Section 28 (the “Study”). The Study examines the use and impact of “credit-based insurance scoring” for motor vehicle insurance in Vermont.

Credit-based insurance scoring is the use of a customer’s personal credit information by an insurance company as a rating factor to calculate the premium that customer will pay for an insurance policy.

The Department performed a two-part assessment to complete the Study: 1) we first reviewed existing studies on credit-based insurance scoring to assess its efficacy as a predictor of risk and the legal considerations of its use; and 2) we then performed an inquiry into the Vermont market that included informational meetings with industry, a data call, and an analysis of the data to assess the potential impacts of limitations on the use of credit-based insurance scoring on insurance rates in Vermont.

The Department’s study showed that the use of credit-based insurance scores in some form for motor vehicle insurance is a common practice nationally (only three states disallow the practice) and in Vermont. Credit-based insurance scores are a predictor of claims risk that appears to provide a financial benefit to many Vermont policy holders. The Department’s most significant findings and recommendations are highlighted below.



## **Principal Findings**

- Vermont has the seventh lowest average annual automobile insurance premium in the country and premiums are on the decline.
- Vermont's average credit score is the fifth highest in the nation.
- Credit-based insurance scores are used to assist calculating premiums for sixty percent (60%) of the vehicles in the Department's data set of which:
  - Drivers of approximately sixty-six percent (66%) of vehicles pay less based on their credit-based insurance score.
  - Drivers of approximately eighteen percent (18%) of vehicles pay no more or no less based on their credit-based insurance score.
  - Drivers of approximately sixteen percent (16%) of vehicles pay more based on their credit-based insurance score.
- There is no evidence, based on the data reviewed by the Department that a Vermont driver's premium is related to his or her income.
- Compared to vehicles with premiums using credit-based insurance scores, the median annual premium is \$219 higher when credit-based insurance scores are not used to assist with calculating premiums. If the use of credit-based insurance scores was prohibited, approximately two-thirds of vehicles with premiums calculated with credit-based insurance scoring would see an increase in premium. The median annual premium increase would be \$33.
- Vermont is one of two states nationally that does not regulate the use of credit-based insurance scores. Many states have adopted all or part of the National Conference of Insurance Legislators (NCOIL) Model Act, which provides protections to consumers from adverse impacts and misuse of credit-based insurance scoring.
- In practice, Vermont consumers are unable to receive an automobile insurance quote and policy unless they "opt-in" to share their credit information with the insurer under the Vermont Fair Credit Reporting Act.

## **Recommendations**

- Based on Vermont's competitive and low cost market, the analysis demonstrating most Vermont drivers benefit from credit-based insurance scoring and the lack of significant relationship between credit score and income, the Department does not find persuasive reasons to recommend major policy shifts regarding the regulation of automobile insurance rates in Vermont.

- The Legislature should consider adoption of the NCOIL Model Act or similar safeguards on the use of credit-based insurance scores to mitigate some of the potential adverse impacts on individual consumers and to provide enhanced consumer benefits and protections.
- The State should further study whether the “opt-in” provisions of the Vermont Fair Credit Reporting Act provides meaningful protections for consumers who do not wish to share their credit information with insurers.

As mentioned, this Study would not have been possible without the good and diligent work of Department staff members. We would like to recognize and thank those who played a central role in crafting this Study including Phil Keller, Kevin Gaffney, Sarah Lindberg, Christina Rouleau, Ryan Chieffo, KC Ng, Scot Kline, and Emily Kisicki. The Department would also like to thank Rosemary Raszka, Pat Murray and Brenda Clark for their contributions. We look forward to discussing the Study with you and please be in touch with any questions.

Sincerely,



Michael S. Pieciak  
Commissioner



Kaj Samsom  
Deputy Commissioner of Insurance

## **Introduction**

Section 28 of Act 147 of the 2016 legislative session directed the Commissioner of the Department of Financial Regulation to:

conduct a study of credit-based insurance scoring for motor vehicle insurance. The study shall make findings regarding the prevalence of use of credit-based insurance scoring and related rating factors in Vermont's market for motor vehicle insurance, its impact on Vermont motor vehicle insurance consumers, and how limitations on the use of such scoring would affect insurance companies doing business in Vermont and the affordability and availability of motor vehicle insurance.

The Commissioner is required to report his findings and recommendations to the General Assembly on or before December 15, 2016.

The Department of Financial Regulation (the "Department") has prepared this report in response to the Legislature's directive. The report consists of three parts. Section I is an examination of the evolution of credit-based insurance scoring and a review of previous studies that have addressed its actuarial validity and the legal concerns raised by its opponents. Section II presents the Department's findings about the prevalence and impact of credit-based insurance scoring in Vermont, based upon a data call to insurers constituting sixty-five (65%) of the private passenger automobile market in Vermont. Finally, Section III summarizes the Department's findings and presents recommendations for future action.

### **I. The Evolution of Credit-Based Insurance Scoring: Background and Issues**

#### **A. An Introduction to Insurance Rate-Making**

There are many types (or "lines") of insurance available in the market. Some of the most common lines of insurance bought by consumers include automobile insurance, homeowner's insurance, life insurance, health insurance, and commercial liability insurance. In each of these lines, consumers purchase insurance to protect themselves against the risk of financial loss. Life

insurance, for example, is typically purchased to protect a policyholder's beneficiaries against the financial losses that would result from the policyholder's untimely death. Health insurance can help protect a policyholder and his or her family against the potentially crippling costs of treating a major illness. Automobile insurance protects drivers against the costs of accidents, including motor vehicle damage, medical payments and potential lawsuits.

Insurance is based on the concept of risk spreading (or "risk pooling"). For example, while it is difficult to predict whether an individual driver will have an accident during a twelve-month period, it is easier to predict the total dollar losses that a population of 100,000 drivers will suffer during the same time period. This is because the law of large numbers states that as the size of a population of related individuals (e.g., drivers) increases, the actual experience of the population for a common exposure (such as the risk of having an accident) will increasingly approximate the expected experience.<sup>1</sup> Thus, for example, if accident-related losses for an insured population of 100,000 drivers total \$50 million in 2016, \$50 million will constitute a reasonable starting point for projecting 2017 accident losses. The final projected losses for 2017 will be influenced by other factors as well, such as inflation (which increases the costs of repairs, parts and medical payments) or the rise or fall of gas prices (which influence how far people drive).

Once the total losses of a population have been projected, insurers then apportion those losses among individual members of the insured population based on characteristics that correlate with the risk of loss. These risk-related characteristics are known as rating factors and they are the primary variables that insurers use in calculating an individual's automobile insurance premium. Traditional rating factors include such characteristics as driving history,

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<sup>1</sup> FUNDAMENTALS OF INSURANCE PLANNING, KEVIN M. LYNCH & GLENN E. STEVICK, JR., Am. Coll. Press (5<sup>th</sup> ed.), at 1.8.

vehicle model, and the driver's age, gender and marital status. Vehicle model is correlated to accident risk because older vehicles may lack safety features (such as air bags and anti-lock brakes) that have been shown to reduce both the frequency and severity of accidents. Gender and age are common rating factors because both have also been shown to be correlated to accident frequency and severity.<sup>2</sup> Since rating factors are based on the historical correlation between certain classifications and accident risk, they do not necessarily reflect the risk profile of an individual member of a group. For example, although young males as a group tend to have more accidents than older males as a group, an individual teenage male may be a more responsible driver than the average 40- to 50-year-old male. That is why many insurers offer discounts (such as a "good student discount") to more accurately differentiate members of the youthful driver classification.

In some states, insurers are not allowed to use certain demographic factors in automobile rating, even though those factors are statistically correlated to increased risk. For example, even though gender has historically been correlated with the risk of having a serious automobile accident (*see* fn. 2, above), only six states (Hawaii, Michigan, Montana, North Carolina, Massachusetts and Pennsylvania) either ban or severely limit the use of gender rating in automobile insurance pricing.<sup>3</sup> In Hawaii, insurers are prohibited from using age as a rating factor, even though, as noted above (*see* fn. 2), youth is correlated with a higher risk of having a

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<sup>2</sup> *See, e.g., General Statistics: Fatality Facts by Gender*, Insurance Institute for Highway Safety (available at <http://www.iihs.org/iihs/topics/t/general-statistics/fatalityfacts/gender>); *see also* Elena Constantinou, et al., *Risky and Aggressive Driving in Young Adults: Personality Matters*, ACCIDENT ANALYSIS AND PREVENTION 43 (2011), 1323-1331 (available at <https://www.ucy.ac.cy/psychophysiology/documents/8.pdf>).

<sup>3</sup> Laura Adams, *How Age, Gender and Marital Status Affect Your Car Insurance*, HUFFINGTON POST, May 31, 2015 (available at [http://www.huffingtonpost.com/laura-adams/how-age-gender-and-marital-status-affect-your-car-insurance\\_b\\_6973360.html](http://www.huffingtonpost.com/laura-adams/how-age-gender-and-marital-status-affect-your-car-insurance_b_6973360.html)). The European Union also prohibits the use of gender in automobile insurance pricing. *Insurance Gender Ruling and You*, BBC NEWS, December 21, 2012 (available at <http://www.bbc.com/news/business-12608777>).

serious accident.<sup>4</sup> Massachusetts severely restricts the use of age as a rating factor, prohibiting it except as a credit for insureds 65-years or older with safe driving records.<sup>5</sup> These prohibitions are the result of a determination by the state legislature or insurance regulator that the use of some rating factors is fundamentally unfair or contrary to public policy, even when they are predictive of risk. The lack of consensus about the appropriateness of using factors such as gender and age reflects the difficult policy issues that arise between apportioning risk accurately and apportioning it fairly.<sup>6</sup>

The rating model discussed in this section is called classification rating. Vermont's property and casualty rating laws are based on classification rating. In classification rating, individual drivers' loss propensities are measured based on actuarial classes that are correlated with an increased or reduced risk of loss (for example, vehicle model, driving record, age, sex, marital status, etc.). The goal of classification rating is to have a policyholder's premium match his or her risk potential as closely as possible. When factors which are statistically predictive of risk, like gender and age, are excluded from the rating formula, then the alignment between risk and premium will be less precise and a certain amount of cross-subsidization will occur. For example, in states that ban the use of gender as a rating factor, women will pay the same rate as men (all other factors being equal) and will, therefore, subsidize male drivers even though men are, on average, more likely to be involved in serious accidents and to cause higher losses than women.

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<sup>4</sup> See Adams, *supra* note 3.

<sup>5</sup> MASS. GEN. LAWS ANN. ch. 175 § 113B.

<sup>6</sup> Vermont's prohibition on unfair discrimination in automobile insurance rating is set forth at 8 V.S.A. § 4685(d). See also 8 V.S.A. § 4724(7), which prohibits unfair discrimination in rate setting and underwriting in the insurance industry generally.

## **B. An Overview of the Property and Casualty Insurance Market in Vermont**

### **1. The Legal Framework: Open and Competitive Rate-making**

Vermont law employs two different methods for regulating insurance rates. For health insurance products such as disability insurance, supplemental health insurance and long-term care insurance, proposed rates must be filed with and approved by the Insurance Division (the “Division”) of the Department before they can be used in the marketplace. Under this “prior approval” framework, proposed rates can be rejected if the Division’s actuarial review indicates that they are likely to be excessive, that is, if either the rates or the insurer’s expenses are unreasonably high in relation to its projected claims.

On the other hand, rates in Vermont’s property and casualty markets are, for the most part, not subject to prior approval.<sup>7</sup> Rather, the Legislature has adopted a statutory framework based on the assumption that robust price competition among insurers will be sufficient to keep rates reasonable for Vermont consumers. Under this “open and competitive market” framework, the Division may reject rates on the ground that they are inadequate (i.e., insufficient to sustain projected losses) or unfairly discriminatory, but not on the ground that they are excessive.<sup>8</sup>

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<sup>7</sup> The exceptions are assigned risk auto, workers compensation rates in the residual market, and professional liability or commercial rates developed for “claims made” policies.

<sup>8</sup> 8 V.S.A. §4685(b)(1). According to the Insurance Information Institute, thirty-four jurisdictions (including the District of Columbia) have adopted an “open and competitive” rating structure for private passenger automobile insurance, while seventeen jurisdictions require some form of “prior approval” of personal lines auto insurance rates. Prior approval frameworks can range from a requirement that all private passenger rates be filed and approved before being implemented to so-called flex rating, where only increases or decreases outside of a specified flex-band (e.g., 7%) must be approved by regulators. *See Regulation Modernization*, INSURANCE INFORMATION INSTITUTE, April 2015 (*available at* <http://www.iii.org/issue-update/regulation-modernization>). There is an ongoing debate about whether requiring prior approval results in lower automobile insurance rates for drivers, but one factor sometimes overlooked is that prior approval regulatory systems tend to be costlier, since they require greater use of actuaries or other highly-trained professionals to review filed rates.

## **2. The Property & Casualty Insurance Market in Vermont**

In general, Vermont's statutory competitive market structure appears to be serving consumers well. As of 2013 (the most recent year for which data is available), Vermont's average annual automobile insurance premium of \$723 was the seventh lowest in the country and had actually declined by 2.6% during the preceding five years.<sup>9</sup> Currently, all major national auto insurers participate in the Vermont market, as well as a number of highly competitive domestic insurers (including Vermont Mutual, Union Mutual, the Co-Operative Insurance Companies, Vermont Accident Insurance Company and Green Mountain Insurance Company). In addition to keeping premiums low, the vigorous price competition in Vermont's auto insurance market has two significant collateral benefits: first, because auto insurance is affordable, Vermont has one of the lowest rates of uninsured drivers in the country;<sup>10</sup> and, second, because of the availability of insurance, Vermont's assigned risk market (the market of last resort) is less than 0.1% of the size of its voluntary market.<sup>11</sup>

### **C. The Use of Credit-Based Insurance Scores as a Rating Factor**

#### **1. The Emergence of Credit-Based Insurance Scoring**

In a competitive automobile insurance market like Vermont's, insurers have an economic incentive to try to predict risk as accurately as possible. An insurance company that can predict risk better than its competitors will be able to identify drivers who are paying more than they

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<sup>9</sup> *Auto Insurance Database Report: 2012/2013*, NAT'L ASS'N OF INS. COMM'RS at 29 (available at [http://www.naic.org/documents/prod\\_serv\\_statistical\\_aut\\_pb.pdf](http://www.naic.org/documents/prod_serv_statistical_aut_pb.pdf)).

<sup>10</sup> *Estimated Percentage of Uninsured Motorists by State, 2012*, INS. INFO. INST.; available at <http://www.iii.org/fact-statistic/uninsured-motorists>.

<sup>11</sup> AIPSO (Auto Insurance Plan Servicing Office) Facts 2015/2016, Chart 9A (on file with DFR). The assigned risk market is a pool created by 8 V.S.A. § 4694 where drivers who are unable to find coverage in the voluntary market (for example, as the result of a bad driving record) can purchase coverage from an assigned risk carrier appointed by DFR. Premiums in the assigned risk market are generally higher than in the voluntary market.

should relative to the risk they pose and will be able to offer those drivers lower premiums than they are currently paying. Developing better methods of predicting risk is thus one of the major ways that insurers compete against each other in the marketplace.

Banks and other lenders began using credit scores<sup>12</sup> in the mid-1980s to measure the creditworthiness of potential borrowers. In the early 1990s, property and casualty insurers noticed that some of the factors that go into the development of credit scores also exhibit a strong correlation to insurance losses. This correlation made intuitive sense to insurance companies, since it was felt that a consumer's use (or abuse) of credit reflected a sense of responsibility (or lack of responsibility) that translated into other aspects of his or her life, including behavior related to insurance losses.<sup>13</sup> Utilizing those credit factors that appeared related to loss, a company called Fair Isaac Corporation (FICO) developed the first credit-based insurance score and made it commercially available to insurers as a rating tool in 1993.

The use of credit-based insurance scoring has grown dramatically over the last two decades as insurance companies have increasingly realized that credit-based insurance scores are effective predictors of loss. Today, credit-based insurance scoring is used as a rating factor by virtually every automobile insurance company in the country.<sup>14</sup> While some larger insurers like Allstate and State Farm have developed their own scoring models, many smaller firms, including

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<sup>12</sup> A credit score is a numerical expression of a consumer's creditworthiness based on a number of factors contained in his or her credit report, including the consumer's history of debt repayment and/or default. The three major credit reporting agencies are Equifax, Experian and Transunion. The use of credit information is regulated at the federal level by the Fair Credit Reporting Act (15 U.S.C. § 1681, *et seq.*) and, at the state level by the fair credit reporting provisions of the Consumer Protection Act (9 V.S.A. § 2480a, *et seq.*)

<sup>13</sup> This "behavioral" explanation of the predictive power of insurance scoring will be discussed in Section I.D.3.

<sup>14</sup> Every company interviewed by the Department in the preparation of this report uses insurance scoring as a rating tool.

Vermont's domestic insurers, purchase insurance scores for applicants and insureds from third-party vendors like FICO and its chief competitor ChoicePoint.<sup>15</sup>

## 2. How Credit-Based Insurance Scores are Developed

Since risk prediction techniques are an important form of competition in the insurance industry, most companies that develop insurance scoring models consider them to be a trade secret and will not publicly disclose the credit factors and statistical methodologies that underlie their models. According to a 2007 Federal Trade Commission Report to Congress on the use of credit-based insurance scores, however, the types of information that are typically used to develop scoring models include credit history, the length of the consumer's credit history, amounts owed relative to available lines of credit, and the number of new credit accounts.<sup>16</sup>

None of the insurance scoring models examined by the Department use the race, gender, income, ZIP Code, ethnicity, religion or nationality of the consumer as a factor. The use of any of these factors in calculating a score is explicitly prohibited by the National Conference of Insurance Legislators' "Model Act Regarding the Use of Credit Information in Personal Insurance," which will be discussed in a subsequent section and which has been adopted by a majority of the states (but not Vermont).

To establish the predictive power of credit information, score developers begin by obtaining a sample of historical insurance policies for which losses are already known. Losses that occurred over the life of the policy (the "exposure period") are matched with credit information known about the policyholder at the start of the exposure period. Using statistical

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<sup>15</sup> The process by which insurers obtain permission to access credit-based information is discussed in Section I.E.3.

<sup>16</sup> *Credit-Based Insurance Scores: Impacts on Consumers of Automobile Insurance*, FED. TRADE COMM'N, July 2007, Table 1 (available at [https://www.ftc.gov/sites/default/files/documents/reports/credit-based-insurance-scores-impacts-consumers-automobile-insurance-report-congress-federal-trade/p044804facta\\_report\\_credit-based\\_insurance\\_scores.pdf](https://www.ftc.gov/sites/default/files/documents/reports/credit-based-insurance-scores-impacts-consumers-automobile-insurance-report-congress-federal-trade/p044804facta_report_credit-based_insurance_scores.pdf)) (*hereinafter* "FTC Credit Report").

techniques, score developers then construct a model that correlates actual policy losses with the credit information known at the beginning of the exposure period. “If the relationship between the credit information and loss is sufficiently stable over time, the model can be applied to the credit histories of other consumers to predict the risk of loss they pose.”<sup>17</sup>

#### **D. Regulatory Issues Regarding Credit-Based Insurance Scoring**

##### **1. Are Insurance Scores Predictive of Risk?**

Although there is a continuing debate about why insurance scoring works (see Section I.D.3, *infra*), repeated studies have shown that insurance scores are effective predictors of claims risk. The FTC Credit Report, which is considered by many the definitive study of the use of credit-based insurance scores, looked at a total of 1.4 million automobile policies obtained from insurers comprising twenty-seven percent (27%) of the U.S. automobile insurance market.<sup>18</sup> The FTC compared losses for the sample policies to driver insurance scores obtained from FICO and ChoicePoint. The results established a clear “relationship between credit-based insurance scores and risk for all four types of [automobile] coverage analyzed.”<sup>19</sup> The FTC noted that “as scores increase, the risk of loss consistently decreases”<sup>20</sup> and that “even when non-credit variables [such as driving record and age] are included in the analysis, credit-based insurance scores continue to predict the amount that insurance companies are likely to pay out in claims to consumers.”<sup>21</sup> The

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<sup>17</sup> *FTC Credit Report* at 12.

<sup>18</sup> *Id.*, Appendix C at 4.

<sup>19</sup> *Id.* at 25. The four types of coverage analyzed were: (1) property damage liability, which insures the policyholder for damage he or she causes to the cars or property of others; (2) bodily injury liability, which protects the policyholder from liability for bodily injuries caused to others; (3) collision coverage, which insures the policyholder against damage to his or her own car caused by collision or rollover; and (4) comprehensive coverage, which protects the policyholder against losses from the theft of his or her car and against damage caused by vandalism, fire, hail, etc. *Id.* at 24.

<sup>20</sup> *Id.* at 25.

<sup>21</sup> *Id.* at 26.

FTC's conclusion that credit-based insurance scores are predictive of claims risk is consistent with the results of two other pivotal studies of insurance scoring: a 2003 study of the relationship between claims risk and insurance scores by EPIC Actuaries<sup>22</sup> and a similar study conducted in 2004 by the Texas Department of Insurance.<sup>23</sup> The Department is not aware of any data-based studies concluding that insurance scoring is not predictive of claims risk.

There are two important caveats to the conclusion that insurance scoring has predictive value as a rating factor. The first, as the FTC Credit Report pointed out, is that even insurance companies acknowledge "that they use credit-based insurance scoring models to predict the amount they will pay out in claims, *i.e.*, claims risk."<sup>24</sup> Claims risk is different from actual risk since a driver may become involved in an accident but, for a variety of reasons (such as the ability to self-insure small losses), never submit a claim. Insurance scoring measures the risk that a driver will become involved in an accident and file a claim that leads to an insurance loss. Claims risk may be a subset of actual risk, but they are not the same thing. As such, insurance scoring may not be as predictive of accidents as it appears.

The second caveat is that insurance scoring has a significantly stronger correlation to claim frequency than to claim severity or size. Frequency is a measure of the total number of insurance claims a company receives without regard to their dollar value.<sup>25</sup> These claims can

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<sup>22</sup> *The Relationship of Credit-Based Insurance Scores to Private Passenger Automobile Insurance Loss Propensity*, EPIC Actuaries LLC, June 2003 (hereinafter "Epic Report"), at 2, 21 (available at [http://www.ask-epic.com/Publications/Relationship%20of%20Credit%20Scores\\_062003.pdf](http://www.ask-epic.com/Publications/Relationship%20of%20Credit%20Scores_062003.pdf)) (analysis of a data pool containing records equivalent to 2,690,000 car years showed "a clear pattern of decreasing loss propensity as the insurance score increases.").

<sup>23</sup> *Report to the 79<sup>th</sup> Legislature: Use of Credit Information by Insurers in Texas*, TEX. DEPT. OF INS., December 2004 (hereinafter "Texas Report"), at 18 (available at <http://www.tdi.texas.gov/reports/documents/creditrpt04.pdf>) (for private passenger automobile insurance, "as credit scores improve, the pure premium or average loss per vehicle decreases. Conversely, as the credit scores worsen, the average loss per vehicle increases.").

<sup>24</sup> *FTC Credit Report* at 13.

<sup>25</sup> More specifically, claim frequency "is the ratio of the number of insurance claims to the number of autos insured. For example, a claim frequency of .150 means there are 150 claims for every 1,000 autos insured." *Epic Report* at 7.

range from inexpensive glass claims to catastrophic liability claims. Claim severity, on the other hand, refers to the average cost of a claim and is calculated by dividing the total dollar value of a company's claim losses by the total number of claims it receives.<sup>26</sup> Based on its examination of 1.4 million auto policies and the policyholders' corresponding insurance scores, the FTC concluded that customers with lower scores filed substantially more claims than those with higher scores. For instance, "customers with the lowest credit-based insurance scores were about 1.7 times more likely to file a property damage liability claim as customers with the highest credit-based insurance scores. On the other hand, . . . the average size of the claims paid was nearly constant regardless of credit-based insurance score."<sup>27</sup> The Epic Report reached a similar conclusion, finding that "claim frequencies are the primary reason that loss propensity varies by insurance score."<sup>28</sup> Finally, a 2005 supplement to the Texas Report concluded that "credit score was related to the probability of filing a claim" but "found little or no statistical evidence that credit score was related to the amount of a claim or *claim severity*."<sup>29</sup> Although a 2003 study by the University of Texas found that insurance scores are predictive of both claim frequency and severity,<sup>30</sup> this report appears to be an outlier, with the broad consensus among published studies being that the predictive value of insurance scoring is largely limited to claim frequency.

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<sup>26</sup> *Id.*

<sup>27</sup> *FTC Credit Report* at 26-27. The one type of coverage where there was a correlation between insurance score and claim severity was comprehensive coverage, which covers theft. The FTC believed this result "may be attributable to a correlation between having a lower score and a higher probability of being a victim of automobile theft." *Id.* at 27.

<sup>28</sup> *Epic Report* at 30.

<sup>29</sup> *Supplemental Report to the 79<sup>th</sup> Legislature: Use of Credit Information by Insurers in Texas: The Multivariate Analysis*, TEX. DEPT. OF INS., January 31, 2005 (hereinafter "Supplemental Texas Report"), at 2 (available at <https://tdi.texas.gov/reports/documents/credit05sup.pdf>) (emphasis in original).

<sup>30</sup> See B. Kellison, et al., *A Statistical Analysis of the Relationship Between Credit History and Insurance Losses*, Bureau of Bus. Research, Univ. of Tex. at Austin, March 2003, at 10 ("[T]he analyses show that both the likelihood of a positive claim, and the size of the claim should it occur, are significantly related to credit score, even accounting for other underwriting variables and differences in individual insurance company target loss ratios.").

## 2. Credit-based Insurance Scoring's Impact on Racial, Ethnic and Income Groups

Federal case law has created two principal legal theories for establishing unlawful discrimination: disparate treatment and disparate impact. Disparate treatment occurs when a decision-maker intentionally discriminates against an individual on the basis of race, color, ethnicity or gender.<sup>31</sup> An example of disparate treatment might be an employment ad stating that only white applicants will be considered for a job opening. Since insurance scoring models do not use the race, gender, income, ZIP Code, ethnic group, religion or nationality of the consumer as a factor (see Section I.C.2), they do not appear to violate the disparate treatment test.

Disparate impact, on the other hand, arises when a practice has the effect of disproportionately harming the members of a protected class, even though the practice itself makes no reference to the protected class and is facially neutral.<sup>32</sup> It is a defense to a disparate impact charge that a challenged practice serves a legitimate business purpose.<sup>33</sup> For example, if a transportation authority can establish that the ability to run 1.5 miles in twelve minutes is a legitimate job qualification for a transit police officer, the qualification will be deemed lawful, even if it has a disproportionately negative impact on female applicants.<sup>34</sup>

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<sup>31</sup> *Watson v. Fort Worth Bank & Trust*, 487 U.S. 977, 986-988 (1988).

<sup>32</sup> *Id.*

<sup>33</sup> See *Owens v. Nationwide Mut. Ins. Co.*, 2005 WL 1837959 (N.D. Tex. 2005) at \*14. Although the disparate treatment/disparate impact conceptual framework evolved in the context of employment and housing discrimination cases, it has been applied on a limited basis to other allegedly discriminatory business practices as well. The *Owens* case, which addressed the allegedly discriminatory impact of insurance scoring, is one example. Most studies addressing the impact of insurance scoring on protected groups also employ a disparate impact analysis.

<sup>34</sup> See *Lanning v. Se. Penn. Transp. Auth.*, 308 F.3d. 286, 291-292 (3d Cir. 2002).

**a. Race and Ethnicity**

Both the FTC Credit Report and the Texas Report found that while Asians and non-Hispanic whites are fairly evenly represented across the entire range of credit-based insurance scores, African Americans and Hispanics are strongly over-represented in the lowest deciles of that range and underrepresented in the highest deciles.<sup>35</sup> Based on this fact, the FTC and Texas reports both found that African-Americans and Hispanics *on average* pay significantly higher insurance premiums than Asians and non-Hispanic whites.<sup>36</sup>

Although the findings that African-Americans and Hispanics on average pay higher insurance premiums than whites support a *prima facie* case of disparate impact discrimination, the studies also looked at the question of whether credit-based insurance scoring is a proxy (or surrogate) for race and ethnicity. If a factor like credit-based insurance scoring is a proxy for prohibited factors like race and ethnicity, then insurance scores would have no predictive value within the groups on which they have a disparate impact. However, the FTC's analysis found that even within the affected groups (African-Americans and Hispanics), credit-based insurance scoring consistently demonstrated a strong ability to predict claims risk.<sup>37</sup> The FTC concluded that because "scores predict risk within groups, these results show that credit-based insurance scores do not predict risk solely by acting as a proxy for membership in racial and ethnic groups."<sup>38</sup> A similar conclusion was reached by the Supplemental Texas Report, leading Texas Insurance Commissioner Jose Montemayor to conclude that scoring "is not unfairly

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<sup>35</sup> *FTC Credit Report* at 53-54; *Texas Report* at 13-14. The FTC Credit Report obtained information on policyholder race and ethnicity from the Social Security Administration. *FTC Credit Report*, Appendix C at 8-9.

<sup>36</sup> See *FTC Credit Report* at 58-59; *Texas Supplemental Report*, January 31, 2005 cover letter from Jose Montemayor, Texas Insurance Commissioner, to Governor Rick Perry, et al. (characterizing increased premiums for Hispanics and Blacks as a "disproportionate impact").

<sup>37</sup> *FTC Credit Report* at 61-62.

<sup>38</sup> *Id.* at 63-64.

discriminatory as defined in current law because [it] is not based on race, nor is it a precise indicator of one's race [but] is actuarially justified and adds value to the insurance transaction.”<sup>39</sup> Since credit-based insurance scoring is not a proxy for race or ethnicity but rather has independent value as a rating factor, it does not appear to violate the disparate impact theory of discrimination either.<sup>40</sup>

**b. Income**

While the published studies have also addressed the question of whether credit-based insurance scoring has an adverse impact on low income drivers, the results are not nearly as clear-cut as for race and ethnicity. Both the FTC Credit Report and the Texas Report found that as income increases, credit-based insurance scores tend to increase as well, resulting in lower premiums for higher-income drivers.<sup>41</sup> However, the FTC Report found that the correlation between credit-based insurance scores and income is “much weaker than the results for race and ethnicity.”<sup>42</sup> As it did with race and ethnicity, the FTC concluded that credit-based insurance scoring is not a proxy for income status.<sup>43</sup> Since the FTC did not have access to individual income data as it did with policyholder race and ethnicity (see footnote 34), it used the median income of the census tract in which policyholders lived as a surrogate for policyholder income. The FTC acknowledged that this reliance on neighborhood-level income data potentially

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<sup>39</sup> *Texas Supplemental Report*, January 31, 2005, cover letter from Jose Montemayor, Texas Insurance Commissioner, to Governor Rick Perry, et al.

<sup>40</sup> The predictive value of insurance scoring also led the federal court in *Owens* to conclude that scoring has “legitimate business goals” and is not unfairly discriminatory under a disparate impact theory. *See supra* note 34, at \*14-15.

<sup>41</sup> *FTC Credit Report* at 55; *Texas Report* at 15-16

<sup>42</sup> *FTC Credit Report* at 55.

<sup>43</sup> *Id.* at 68.

weakened its findings about the correlation between credit-based insurance scoring and policyholder income.<sup>44</sup>

A recent study by the Georgetown University Law Center attempted to perform a more robust methodological analysis of the relationship between credit-based insurance scores and income. While the Georgetown study also relied on median income in a policyholder's census tract, it attempted to more accurately estimate individual income by also including the insured value of the dwelling covered by the policyholder's corresponding homeowner's policy.<sup>45</sup> The database used in the Georgetown study was obtained from a single large U.S. insurance company and consisted of 66,444 households that purchased combined automobile and homeowner's policies from the company between 1998 and 2006.<sup>46</sup> Comparing estimated policyholder income to credit-based insurance scores obtained from the company, the Georgetown Study concluded that "insurance score and income are very weakly correlated."<sup>47</sup> Even more significantly, the Georgetown Study found that, among households with combined automobile and homeowner's policies, credit-based insurance scoring may have "a slightly *favorable* impact . . . on low income households."<sup>48</sup> This differs from the conclusions of the FTC Credit Report and the Texas Report, both of which found, as noted above, that as policyholder income increases insurance scores tend to rise and premiums tend to decline.<sup>49</sup> Like the FTC Credit Report,

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<sup>44</sup> *Id.* at 55-56.

<sup>45</sup> Darcy Morris et al., "Do Credit-Based Insurance Scores Proxy for Income in Predicting Auto Claim Risk?", J. EMPIRICAL LEGAL STUDIES 14 (forthcoming 2016)[hereinafter *Georgetown Study*].

<sup>46</sup> *Id.* at 13.

<sup>47</sup> *Id.*

<sup>48</sup> *Id.* at 16 (emphasis in original).

<sup>49</sup> The *Georgetown Study* also contradicts the results of a 2012 report by the Consumer Federation of America ("CFA") and a 2004 report by the Missouri Department of Insurance. The CFA report, which relied heavily on the findings of the FTC Credit Report and the Texas Report, concluded that the use of insurance scoring "clearly" results in "disparate treatment of low- and moderate-income drivers by major auto insurers." Stephen Brobeck et al., "The Use of Credit Scores by Auto Insurers: Adverse Impacts on Low- and Moderate Income Drivers," Consumer Federation of America (2013), at 6. The 2004 Missouri report found that credit-based insurance scoring "produces significantly worse scores for residents of low-income ZIP Codes." MISSOURI INSURANCE DEPARTMENT, INSURANCE-BASED CREDIT SCORES: IMPACT ON MINORITY AND LOW INCOME POPULATIONS IN MISSOURI, 1-2

however, the Georgetown Study found that insurance scoring “does not proxy for income in predicting auto claim risk.”<sup>50</sup>

### **3. Why Credit-Based Insurance Scoring Works**

Although credit-based insurance scores are strongly correlated with claims risk and do not appear, when used as a rating factor, to function as a surrogate for race, ethnicity or income, there is no consensus about why credit-based insurance scoring is an independent and effective predictor of risk. As noted in Section I.C.1, when credit-based insurance scoring first appeared insurers embraced it not only because of its predictive power but also because it made intuitive sense to them that a consumer’s use of credit reflected a sense of personal responsibility that translated into other aspects of his or her life. This “behavioral” theory achieved academic expression in a 2007 article entitled “Biological and Psychobehavioral Correlates of Credit Scores and Automobile Insurance Losses: Toward an Explanation of Why Credit Scoring Works” by Patrick Brockett and Linda Golden of the University of Texas.<sup>51</sup> Brockett and Golden postulated that the same characteristics that cause risky financial behavior in an individual will cause risky behaviors in other areas of life, including driving.<sup>52</sup> In a presentation given to the Casualty Actuarial Society in October 2007, the authors summarized their findings in the simple epigram “a man drives as he lives.”<sup>53</sup>

The problem with this theory, as the Georgetown Study points out, is not only that it is impossible to prove, but that it is “inconsistent with the fact that two of the major drivers of

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(2004). Like the FTC Credit Report and the Texas Report, the Missouri Report has been criticized for using median income within zip code rather than policyholder-specific data as its measure of income.

<sup>50</sup> *Georgetown Study* at 16.

<sup>51</sup> Patrick Brockett and Linda Golden, *Biological and Psychobehavioral Correlates of Credit Scores and Automobile Insurance Losses: Toward an Explanation of Why Insurance Scoring Works*, 74 J. OF RISK & INS. (2007).

<sup>52</sup> *Id.* at 24.

<sup>53</sup> Presentation to the Casualty Actuarial Society Predictive Modeling Conference on October 11, 2007, at 8, available at <https://www.casact.org/education/specsem/f2007/handouts/brockett.ppt>.

credit risk are unemployment and health problems, neither of which seem to reflect irresponsible behavior . . . .”<sup>54</sup> It is also inconsistent with a number of variables that bear a proven relationship to claims risk but little apparent relationship to reckless behavior, e.g., number of miles driven and age of vehicle. The FTC considered a variety of theories about the predictive power of credit-based insurance scoring, but was unable “to draw any broad or definitive explanations why there is a relationship between credit-based insurance scores and risk.”<sup>55</sup>

**E. Regulation of Credit-Based Insurance Scoring in Vermont and Other States**

**1. States that Do Not Allow the Use of Credit-Based Insurance Scoring**

As noted above, state legislators and regulators have often struggled to find an appropriate balance between apportioning risk accurately and apportioning it fairly. Some states prohibit the use of gender, age and marital status as rating factors, despite the fact that they are predictive of risk. However, the majority of states (including Vermont) allow those classifications to be used in setting rates. Rate-making involves drawing distinctions between personal characteristics and driving behaviors that bear a demonstrated correlation to risk. Although highly suspect classifications such as race, religion and national origin are deemed to be unfairly discriminatory in virtually every state,<sup>56</sup> the general practice appears to be to allow the use of less suspect classifications to the extent that they enhance the accuracy of risk allocation.

Currently only three states – Hawaii, Massachusetts and California – do not allow the use of credit-based insurance scoring in setting automobile insurance rates. Hawaii’s ban, which was

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<sup>54</sup> *Georgetown Study* at 6. The NCOIL Model Act, discussed *infra*, attempts to mitigate the adverse impact of both factors.

<sup>55</sup> *FTC Credit Report* at 30.

<sup>56</sup> Ronen Avraham et al., *Understanding Insurance Anti-Discrimination Laws*, 87 S. CAL. L. REV. 195, (2014).

passed in 1987, is the oldest of the three and is part of a statutory framework that bans other rating factors deemed by the legislature to be discriminatory as well, including race, religion, ethnicity, age, sex, length of driving experience, marital status and physical handicap.<sup>57</sup> Massachusetts' ban was enacted by the legislature in 2012, four years after the state insurance commissioner deregulated the automobile insurance market by introducing a policy of "managed competition," and it codified a preexisting regulatory ban on the use of credit-based insurance scores. Although the Massachusetts prohibition, unlike Hawaii's, does not explicitly characterize insurance scoring as discriminatory,<sup>58</sup> the law was enacted at the recommendation of Attorney General Martha Coakley, whose 2009 report on insurance deregulation concluded that credit-based insurance scoring disadvantages minority and low-income drivers.<sup>59</sup> The report recommended moving to a rating system that prices drivers based on "how they drive" rather than "who they are."<sup>60</sup>

In contrast to Hawaii and Massachusetts, California law prohibits the use of credit-based insurance scoring indirectly rather than explicitly. The California Insurance Code establishes three mandatory factors, all related to driving behavior, that insurers are required to use in setting rates. These mandatory factors, in order of importance, are: (1) the insured's driving safety record, (2) the number of miles the insured drives annually and (3) the length of the insured's driving experience.<sup>61</sup> In addition, California law gives the state's Insurance Commissioner the authority to establish by regulation additional factors that insurers may consider in rating a

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<sup>57</sup> HAW. REV. STAT. § 431:10C-207 (2013).

<sup>58</sup> MASS. GEN. LAWS Ch. 175E, § 4 (2012).

<sup>59</sup> OFFICE OF ATTORNEY GENERAL MARTHA COAKLEY, AUTOMOBILE INSURANCE: THE ROAD AHEAD, 33(2009).

<sup>60</sup> *Id.* While the Massachusetts report noted the disparate impact of credit-based insurance scoring on low income and minority drivers, it did not address, as the FTC Report did, the issue of whether scoring possesses predictive value and serves a legitimate business purpose.

<sup>61</sup> CAL. INS. CODE § 1861.02 (West 2016).

policyholder.<sup>62</sup> These additional factors include the claim frequency and severity of the territory in which the vehicle is driven and the model and condition of the insured vehicle. The regulations also allow insurers to consider a limited number of personal characteristics (such as gender, marital status and academic performance), but do not include the driver's credit-based insurance score as a permitted factor.<sup>63</sup> The consideration of rating factors not enumerated by statute or regulation is deemed to be unfair discrimination.<sup>64</sup> Like Hawaii and Massachusetts, the primary focus of California's rating system is on driving behavior and vehicle type, and the use of non-driving related factors is severely restricted.

## **2. The NCOIL Model and states that have adopted it**

In an effort to preserve the benefits of credit-based insurance scoring while mitigating some of its potentially adverse effects, the National Conference of Insurance Legislators ("NCOIL") in 2002 released a "Model Act Regarding Use of Credit Information in Personal Insurance" (the "NCOIL Model Act").<sup>65</sup> To date, the NCOIL Model Act has been adopted in whole or part by twenty-nine states.<sup>66</sup> According to the FTC Credit Report, other states have adopted "some of the same types of restrictions [as those] included in the NCOIL model."<sup>67</sup> At present, the only states without any statutory or regulatory restriction on the use of credit-based insurance scoring are Vermont and Pennsylvania.<sup>68</sup>

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<sup>62</sup> *Id.*, § 1861.02(a)(4).

<sup>63</sup> CAL. CODE REGS., tit. 10, § 2632.5 (2016).

<sup>64</sup> CAL. INS. CODE § 1861.02(a)(4) (West 2016).

<sup>65</sup> The National Conference of Insurance Legislators, *Model Act Regarding Use of Credit Information in Personal Insurance* (2015), available at <http://ncoil.org/wp-content/uploads/2016/04/11262015PropertyCasualtyModelAct.pdf>.

<sup>66</sup> The National Conference of Insurance Legislators, *Overview of NCOIL-Based Insurance Scoring Legislation*, <http://ncoil.org/wp-content/uploads/2016/04/2007203b.pdf> (last visited Dec. 14, 2016).

<sup>67</sup> *FTC Credit Report* at 19.

<sup>68</sup> *FTC Credit Report* at 18; ANGEL ROBINSON, INS. DIV. OF IOWA, THE USE OF CREDIT-BASED INSURANCE SCORING IN IOWA, 23 (2011).

The NCOIL Model Act establishes a number of restrictions and safeguards designed to mitigate the adverse impacts and misuse of credit-based insurance scoring. Among the most important of these are:

- a prohibition on the use of income, gender, address, zip code, ethnic group, religion, marital status, or nationality in calculating a consumer's credit-based insurance score;
- a prohibition on the use of a consumer's credit-based insurance score as the sole factor in setting his or her rates or in an insurer's decision to cancel or non-renew a policy;
- for consumers who lack credit history or have a small credit file (such as young drivers), a requirement that the insurer either exclude credit as an underwriting factor or treat the consumer as if he or she had a neutral credit score;<sup>69</sup>
- a prohibition on taking adverse action against a consumer based on negative credit information unless the credit report upon which the adverse action is based has been updated within the previous 90 days;
- A requirement that at least every 36 months the insurer recalculate the insured's credit-based insurance score, unless credit was not used for underwriting or rating the initial policy or unless the insured's renewal premium excludes credit altogether;
- a requirement that the insurer notify the consumer if it does take adverse action based upon credit information, provide the consumer with a clear explanation for

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<sup>69</sup> A "neutral insurance score" is an insurance score that would result in no positive or negative rate impact for the consumer.

the adverse action, and allow the consumer to contest the credit information upon which the adverse action was based;

- a requirement that any credit-based insurance scoring methodology or credit review performed for underwriting or rating purposes exclude collection accounts with a medical industry code or multiple lender inquiries from the home mortgage or auto lending industries; and
- a provision allowing consumers whose credit history has been adversely affected by extraordinary life circumstances such as divorce, serious illness or the involuntary loss of employment to request that their credit-based insurance score not be considered in rating decisions.

At the level of the individual consumer, the NCOIL Model Act provides a number of significant protections from the adverse impacts of credit-based insurance scoring. Some of the most significant of these are the extraordinary life circumstances provision, the requirement that insurers exclude from their scoring methodology collection accounts with a medical industry code, and the requirement that insurers exclude credit as an underwriting factor for drivers with little or no credit history.

### **3. Vermont's regulatory framework**

As noted above, Vermont is one of only two states that does not regulate the use of credit-based insurance scoring as a rating factor. Although most insurers interviewed by the Department indicated that they follow the NCOIL Model Act's requirements in their transactions with Vermont consumers, drivers who purchase insurance from companies that do not follow the Model Act in Vermont are not protected by the safeguards discussed above.

In the absence of regulation that addresses the use of credit-based insurance scoring in rate setting, the principal state law protections available to credit consumers in Vermont are found in the provisions of the Vermont Fair Credit Reporting Act (“VFCRA”).<sup>70</sup> The VFCRA governs access to a consumer’s credit history and generally requires that third parties obtain affirmative consent from a consumer (i.e., that the consumer “opt-in”) before accessing his or her credit history.<sup>71</sup> Insurance producers interviewed by the Department during the course of this study uniformly reported that they obtain consumer consent prior to accessing credit information during the insurance application process. However, the Department has received occasional anecdotal reports that consumer credit information was accessed during the application process without affirmative consent, so the possibility exists that, while most producers comply with the “opt-in” requirements of the VFCRA, those requirements are not followed universally at the point of sale.

Perhaps the major takeaway from the Department’s survey of insurance producers is that the insurers for whom the producers write business will not quote or sell a policy of automobile insurance unless they can access an applicant’s credit information.<sup>72</sup> As a result, according to the producers interviewed by the Department, very few consumers actually exercise their legal right to withhold such information. This suggests that the “opt-in” requirements of the VFCRA may not provide a meaningful level of protection for those Vermont consumers who desire to purchase automobile insurance but do not desire to disclose their credit information.

## **F. Summary**

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<sup>70</sup> 9 V.S.A. §§ 2480a-2480n.

<sup>71</sup> 9 V.S.A. § 2480e.

<sup>72</sup> As will be discussed in the next section, this issue was also raised with the eight insurers interviewed by the Department.

A small library could be filled with the studies that have been published in the last fifteen years concerning credit-based insurance scoring. The discussion in this portion of the report is intended to provide a general background on some of the issues that legislators have considered in attempting to strike a balance between the benefits and drawbacks of insurance scoring. As with the use of gender as a rating factor, state legislatures have adopted different positions on credit-based insurance scoring. A handful of states have disallowed credit-based insurance scoring entirely, while the majority of states have adopted some version of the NCOIL Model Act, which seeks to preserve the benefits of credit-based insurance scoring in matching risk with premium while mitigating its potential abuses. The second half of this report will discuss the results of DFR's investigation into the prevalence of credit-based insurance scoring in Vermont and its impact on Vermont consumers.

## **II. The Impact of Credit-Based Insurance Scoring on Vermont Consumers**

### **A. Introduction**

The Department identified eight automobile insurance groups, consisting of eighteen separate companies and including seven major national carriers and one Vermont domiciled insurer, to participate in this study. The eight groups represent sixty-five percent (65%) of Vermont's private passenger automobile market.<sup>73</sup> The Department's inquiry into the use of credit-based insurance scoring and its impact on Vermont consumers was divided into two stages.

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<sup>73</sup> The Department selected study participants based primarily on size and market share so that the sample would provide a good cross-section and proportionate sample for the whole market. It was impractical to include all companies, because the complete auto market is 48 groups and 98 companies.

- The Department first conducted a series of informational meetings with representatives of eight insurance groups to familiarize the insurance representatives with the goals of the study and to help the Department understand how credit-based insurance scoring is currently being used in Vermont.
- The Department next requested data from the eight insurance groups about their entire private passenger automobile population in Vermont including information about the rated driver (i.e., the driver assigned to the vehicle) such as age, sex, marital status, zip code, city/town, credit-related insurance scores, chargeable accidents and violations, liability limit, as well as the current premium being charged for liability and physical damage coverage for driver's vehicle.

## **B. Industry Meetings**

Department staff developed a standardized agenda for the industry meetings to ensure that the same information was elicited from each insurer. In general, the meetings addressed three general topics: (1) underwriting (i.e., the process of accepting, rejecting and classifying insurance risks in order to charge an appropriate premium); (2) the use of credit at policy procurement and renewal; and (3) how insurers develop and maintain their insurance scoring models.

### **1. Underwriting**

The Department learned that none of the eight automobile insurance groups deny auto coverage based on a credit-based insurance score alone. Rather, applicants are only denied coverage when other non-credit risk factors, such as driving record, are taken into consideration along with their credit-based insurance score.

## **2. The Use of Credit Scores in Policy Procurement and Renewal Decisions**

Insurers typically rely on credit-based insurance scores when issuing and renewing automobile policies. Different regulatory issues arise at each decision point.

The Department learned that none of the eight automobile insurance groups will quote or issue an automobile policy unless an applicant's credit information is obtained. Accordingly, very few consumers exercise their legal right to withhold credit information at the point of sale. Therefore, the "opt-in" requirements of the VFCRA may not provide a meaningful level of protection for Vermont consumers who want to purchase an automobile policy, but do not want to provide access to personal credit information.

There is much less uniformity in the use of credit information at policy renewal. Some insurance groups believe the initial credit information considered when a policy is procured remains predictive of loss risk when a policy is renewed. Others indicate credit plays less of a role at renewal because, as their experience with the insured increases, they develop their own risk profile of the customer based on factors such as claims activity, driving record, length of time with the company and information about the insured's driving habits developed using telematic monitoring devices.<sup>74</sup>

The eight automobile insurance groups interviewed do not automatically get an updated credit history and recalculate a policyholder's insurance score at the time of renewal. This means Vermont consumers who purchase insurance from companies that do consider credit in their renewal pricing may not realize the benefit of an improvement in their insurance score. Adoption of the NCOIL Model Act would address this concern as it requires the insurer to recalculate the

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<sup>74</sup> Telematics (or "usage-based insurance") has become an increasingly important rating tool for automobile insurers. Telematic devices are installed in a vehicle with the insured's consent and measure several elements relevant to determining the insured's risk, including miles driven, time of day, where the vehicle is driven (GPS), rapid acceleration, hard braking, hard cornering, and air bag deployment.

insurance score at least every 36 months (unless credit was not considered at the policy's procurement or is excluded completely from the renewal decision).

### **3. Development and Maintenance of Credit-Based Insurance Scoring Models**

Each of the seven major national carriers interviewed by the Department has developed their own proprietary credit-based insurance scoring models, while Vermont's domestic insurers purchase credit-based insurance scores from an actuarial modeling service (i.e. FICO or ClearChoice). Those that have developed their own proprietary credit-based insurance scoring models noted they continually assess and calibrate their scoring models to maintain appropriate pricing for their products and to remain competitive in the marketplace.<sup>75</sup>

#### **B. The Department's Data Call and its Results**

##### **1. General Findings**

The Department received information for 253,197 private passenger vehicles in Vermont. The Department's analysis determined the median annual premium for the Vermont vehicles included in the survey was \$532 and forty-four percent (44%) of premiums fell within \$200 of the median (\$332 to \$732). Nearly thirty percent (30%) of premiums exceeded \$750 annually and three percent (3%) exceeded \$1500 annually. The Department also collected information about premium and credit-based insurance score distributions by county, which are reflected in the charts attached as Appendix 1.

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<sup>75</sup> This study did not attempt to evaluate the inner working of the insurer or vendor scoring models as regulatory resources are not currently available to undertake such a study. On a national level, the NAIC's Market Regulation and Consumer Affairs Committee is examining the broader topic of how insurers use Big Data (i.e., the computerized evaluation of large data sets) to analyze trends in claims, driving behavior, underwriting and pricing. That examination may involve evaluation of credit-based insurance scoring models by regulators.

## **2. The prevalence and impact of credit-based insurance scoring in Vermont**

The Department found that credit-based insurance scoring influenced the premium for sixty percent (60%) of the vehicles included in the Department's data set.<sup>76</sup> The size of that influence depends on a number of factors, including how much weight each insurer's scoring model places on credit and the predictive power of other non-credit-related rating variables used in the insurer's pricing model. *In general, however, the Department found that policyholders whose premiums are based on credit-related insurance scores tend to pay lower annual premiums than policyholders whose premiums do not include insurance scores.*

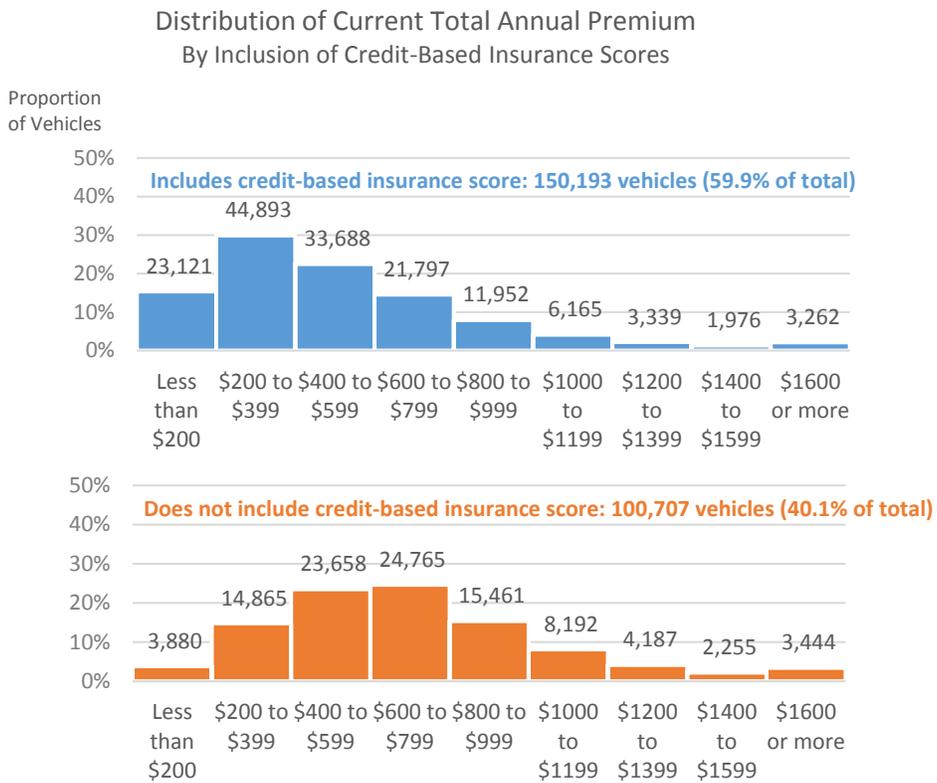
As shown in the tables below, the median annual cost of insurance is more than \$200 less for policyholders whose premiums include credit-based insurance scores than for policyholders whose premiums exclude credit factors (\$437 versus \$660). However, the benefits of credit-based insurance scoring are not universal. Policyholders whose credit-based insurance scores are twenty-five percent (25%) worse than average pay between eighteen percent (18%) to fifty-three percent (53%) more for auto insurance than the average Vermont driver. Policyholders whose scores are ten percent (10%) worse than average pay from seven percent (7%) to twenty-one percent (21%) more for insurance.

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<sup>76</sup> Although all insurers interviewed by the Department use credit-based insurance scores as a rating or underwriting factor during the initial policy sale, insurance scoring was not a factor in the pricing of every vehicle included in the Department's data call. For example, some insurance companies have large blocks of existing "legacy" customers whose policies were written before insurance scoring became available. Other companies, as noted above, do not use insurance scores in calculating renewal premiums. Further, insurance scoring often is not used as a rating factor when an applicant (for example, a younger one) has a thin (i.e., limited) credit file. The Department also excluded 2,297 of the 253,197 vehicles because the insurer could not provide a credit-neutral score.

Current Total Annual Premium

	Vehicles	25 <sup>th</sup> Percentile	Median	75 <sup>th</sup> Percentile
Current premium includes credit-based insurance scores	150,193	\$261	\$437	\$686
Current premium does not include credit-based insurance scores	100,707	\$462	\$660	\$892
<b>Total</b>	<b>250,900</b>	<b>\$320</b>	<b>\$533</b>	<b>\$787</b>



**3. The Financial Consequences of Banning Credit-Based Insurance Scoring in Vermont**

The Department also requested the insurers to provide data on each vehicle surveyed assuming a neutral credit-based insurance score had been used.<sup>77</sup> This hypothetical value has the

<sup>77</sup> As noted above, a “neutral insurance score” is an insurance score that would result in no positive or negative rate impact for the consumer.

effect of removing credit factors from a vehicle’s annual premium, so the amount of premium currently influenced by credit can be approximated.

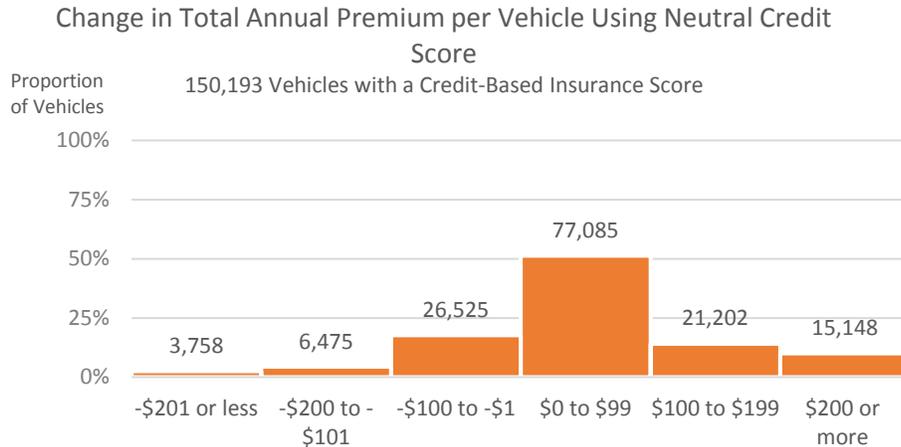
For the sixty percent (60%) of the vehicles with premiums influenced by credit-based insurance scoring approximately two-thirds (or about 99,127 vehicles) pay less or receive a discount based on their credit score. *Therefore, approximately two-thirds of such vehicles would pay more if credit was treated as a neutral factor and the customer’s credit information was disregarded.* Specifically, if credit-based insurance scoring was banned as a rating tool, then, all else being equal, the median annual premium change for all vehicles currently rated using credit would be an increase of roughly \$33.00, with 15,148 drivers seeing a premium increase of greater than \$200.00 and 10,233 receiving an annual decrease of \$200.00 or more.<sup>78</sup>

Estimated Change in Total Annual Premium  
Using Neutral Insurance Scores

150,193 vehicles with premiums that  
include credit-based insurance scores

Premium would stay the same	12,368 (8.2%)
Premium would increase	101,022 (67.3%)
Premium would decrease	36,803 (24.5%)

<sup>78</sup> As noted above, the policies covering slightly over 100,000 vehicles included in the Department’s data call were rated without using insurance scoring, either because they are driven by legacy policyholders or because the insurers issuing the policies do not use credit at renewal. The premiums for these vehicles would see little impact from a prohibition of insurance scoring, with 97.6% remaining the same.



In theory, since many customers’ automobile premiums would apparently increase if credit-based insurance scoring were banned, most insurers in Vermont would collect more overall premium revenue than they currently do. Given that current premium levels are generally adequate, it is possible that insurers would adjust their rates in order to keep the total amount of premium revenue collected the same.<sup>79</sup> Practically speaking, however, implementation of a ban would be a complex undertaking, since insurers would need to develop new actuarial models to try to account for the variability in risk currently predicted with credit-based insurance scores.<sup>80</sup> Predicting the impact of the banning the use of credit factors for pricing private passenger auto market in Vermont is extremely difficult. Given how widely credit is used and how highly it is valued by insurers as a predictive factor, however, removing it

<sup>79</sup> Insurers would not be required to lower their rates to offset the anticipated increase in premium, however, since, as noted in Section I, rates in Vermont’s property and casualty markets, with limited exceptions, are not subject to prior approval by the Department.

<sup>80</sup> The cost-impact of developing new risk prediction models would be felt most keenly by those domestic insurers that purchase their insurance scores from third party vendors because they lack the actuarial resources to develop such models themselves.

as a pricing factor is likely to affect the entire market and to result in higher premiums for many customers.<sup>81</sup>

#### **4. Does Credit-Based Insurance Scoring Adversely Impact Low-Income Vermonters?**

There is an ongoing debate about whether credit-based insurance scoring has an adverse impact on low income drivers. While the FTC Credit Report and the Texas Report found a weak correlation between credit-based insurance scores and income, a more recent report by the Georgetown University Law Center concluded that insurance scoring may actually have “a slightly favorable impact . . . on low income households.”<sup>82</sup>

Since insurers do not collect information about the incomes of their customers, any attempt to examine the relationship between insurance scores and income must rely on demographic factors that function as a reasonable proxy for income. The FTC Report used the median income of the census tract in which policyholders lived as a surrogate for individual income. The Georgetown Study also relied on census tract data but supplemented it with individual-level data about the insured value of the dwelling covered by the auto policyholder’s corresponding homeowners’ policy.

For this study, the Department relied on two proxies for policyholder income: the median adjusted gross income of the policyholder’s town for 2014, as provided by the Vermont Department of Taxes, and, for vehicles where the same insurer provided homeowners’ coverage, the insured amount of the policyholder’s dwelling. Neither approximation of an individual insured’s income and/or wealth is perfect. Overall, however, there was a very weak relationship

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<sup>81</sup> One possible explanation for the finding that more Vermonters benefit from insurance scoring than are harmed by it is the fact that Vermont’s average credit score is the fifth highest in the nation. Alina Comoreanu, *Credit Score Statistics*, WALLETHUB (June 1, 2010) <https://wallethub.com/edu/average-credit-scores/25578/>.

<sup>82</sup> *Georgetown Study* at 16.

between either of these proxies for income and credit-based insurance scores.<sup>83</sup> Moreover, there is *no discernible relationship* between income and the actual premium charged to a policyholder once other factors -- such as age, marital status and driving record -- are included in the calculation of the final rate.

### **III. Findings and Recommendations**

Previous large-scale studies have shown that credit-based insurance scoring is a powerful predictor of claims risk. Based on currently-available data, credit-based insurance scoring appears to provide a tangible financial benefit to Vermont drivers when it is used as a rating tool. Considering the larger context, that Vermont's automobile insurance premiums are already among the lowest in the country, eliminating a rating tool that benefits a significant majority of Vermont drivers would potentially be disruptive to both consumers and the marketplace. Specifically, as a result of this study, the Department makes the following findings and recommendations:

#### **Findings**

- Vermont has the seventh lowest average annual automobile insurance premium in the country and premiums are on the decline.
- Vermont's average credit score is the fifth highest in the nation.
- Credit-based insurance scores are used to assist calculating premiums for sixty percent (60%) of the vehicles in the Department's data set of which:
  - Drivers of approximately sixty-six percent (66%) of vehicles pay less based on their credit-based insurance score.

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<sup>83</sup> This result is consistent with the findings of the FTC Report and the Georgetown Study.

- Drivers of approximately eighteen percent (18%) of vehicles pay no more or no less based on their credit-based insurance score.
  - Drivers of approximately sixteen percent (16%) of vehicles pay more based on their credit-based insurance score
- Although sixteen percent (16%) of drivers pay more for automobile insurance than they would if credit-based insurance scoring was eliminated, there is no evidence, based on the data reviewed by the Department, that a Vermont driver's premium is related to his or her income.
- Compared to vehicles with premiums influenced by credit-based insurance scores, the median annual premium is \$219 higher when credit-based insurance scores are not used to assist with calculating premiums. Based on the policies analyzed by the Department, if the use of credit-based insurance scores was prohibited, approximately two-thirds of vehicles with premiums influenced by credit-based insurance scoring would see an increase in premium. The median annual premium change would be an increase of \$33.
- The vast majority of states allow some use of credit-based insurance scoring as a rating tool by insurers in calculating motor vehicle premiums. Vermont and Pennsylvania are the only states in the nation that have no laws regulating the use of credit-based insurance scoring. Many states have adopted all or part of the NCOIL Model Act, which provides protections to consumers from adverse impacts and misuse of credit-based insurance scoring.
- In practice, Vermont consumers are unable to receive an automobile insurance quote and policy unless they "opt-in" to share their credit information with the insurer under the Vermont Fair Credit Reporting Act.

## **Recommendations**

Based on the outcome of this study, the Department makes the following recommendations:

- Based on Vermont’s competitive and low cost market, the analysis demonstrating a majority of Vermont drivers benefit from credit-based insurance scoring and the lack of significant relationship between credit score and income, the Department does not find persuasive reasons to recommend major policy shifts regarding the regulation of automobile insurance rates in Vermont.
- The Legislature should consider adoption of the NCOIL Model Act or similar safeguards on the use of credit-based insurance scores to mitigate some of the potential adverse impacts on individual consumers and to provide enhanced consumer benefits and protections.
- The State should further study whether the “opt-in” provisions of the Vermont Fair Credit Reporting Act provides meaningful protections for consumers who do not wish to share their credit information with insurers.

## Appendix 1

Credit-based insurance scores were sorted from lowest to highest and then divided into four groups of equal size for each company. The lowest quartile represents customers with the relatively worst scores, or the bottom twenty-five percent (25%). The table show the proportion of vehicles falling into each quartile by county, as well as the median premium paid countywide for liability insurance. Proportions may not sum to one-hundred percent (100%) due to rounding.

	Vehicles	Median Liability Premium	Proportion of Vehicles by Insurance Score Quartile			
			Lowest	Lower	Higher	Highest
ADDISON	8,951	\$204	23%	24%	27%	26%
BENNINGTON	8,749	\$233	28%	25%	24%	24%
CALEDONIA	5,878	\$221	30%	25%	22%	23%
CHITTENDEN	35,876	\$233	21%	25%	26%	28%
ESSEX	1,468	\$218	30%	25%	20%	24%
FRANKLIN	10,225	\$222	27%	26%	24%	22%
GRAND ISLE	2,047	\$202	23%	28%	23%	25%
LAMOILLE	7,610	\$208	24%	27%	24%	25%
ORANGE	7,342	\$205	26%	25%	24%	24%
ORLEANS	5,473	\$233	32%	27%	22%	20%
RUTLAND	16,214	\$222	28%	26%	23%	23%
WASHINGTON	13,825	\$223	26%	26%	23%	25%
WINDHAM	10,937	\$231	27%	25%	23%	24%
WINDSOR	14,838	\$213	26%	25%	24%	25%
<b>Statewide</b>	<b>149,433</b>	<b>\$222</b>	<b>25%</b>	<b>25%</b>	<b>24%</b>	<b>25%</b>