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June 8, 2015

Mr. Charles Raimi  
Deputy Corporation Counsel  
City of Detroit Law Department  
2 Woodward Avenue, Suite 500  
Detroit, Michigan 48226  
[delivered via email to raimic@detroitmi.gov]

Dear Chuck:

Attached is the report detailing the estimated savings based on the proposed PIP reforms. It has been a pleasure working with you in the development of this report.

Pinnacle remains available to answer any questions or provide any clarifications as needed.

Thank You,

Roosevelt

A handwritten signature in cursive script that reads "Roosevelt Mosley".

Roosevelt C. Mosley, FCAS, MAAA  
Principal and Consulting Actuary

# D-Insurance: City of Detroit Insurance Company Feasibility Study

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June 8, 2015

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*Commitment Beyond Numbers*

# D-Insurance: City of Detroit Insurance Company Feasibility Study

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June 8, 2015

## Table of Contents

### Contents

Table of Contents.....	1
Scope.....	2
Reliances and Limitations .....	2
Distribution and Use .....	2
Data.....	3
Project Background.....	4
Reform Proposal #1: PIP Benefit Limits and Preferred Provider Agreements .....	5
Introduce PIP Benefit Limits .....	5
Preferred Provider Agreement .....	5
Reform Proposal #2: High Deductible Option .....	7
Total Estimated Savings – Reform Option #1 .....	7
Total Estimated Savings – Reform Option #2 .....	8
More Recent Data.....	9
Conclusion.....	10
Index of Attachments.....	12

## Scope

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The City of Detroit (The City) engaged Pinnacle Actuarial Resources, Inc. (Pinnacle) to perform a feasibility study for a proposed City-sponsored insurance company (D-Insurance) that will sell no-fault insurance to vehicle owners in Detroit. The initial phase of the project was for Pinnacle to review available insurance data and proposed legislative changes to the Michigan no-fault law that would apply to the proposed new insurer, and to estimate the premium savings that could be achieved based on the law changes.

Based on the findings in the initial phase and the outcome of the proposed legislative changes, Pinnacle would then assist The City with development of the rating and underwriting plan for D-Insurance as well as projected financial results and capital requirements.

This report outlines the calculation of the estimated savings.

## Reliances and Limitations

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In developing this report, Pinnacle has relied primarily upon data and information supplied by The City and the Insurance Research Council (IRC). We relied upon the general accuracy of this data and information without independent verification. However, we did review certain elements of this data and information for reasonableness and consistency with our knowledge of the insurance industry and the claims process. We also validated that the data provided was consistent with other sources of publicly available information. Any errors or omissions in the data provided could have a material effect on our analysis of the projected savings.

The analysis of the IRC claim experience was for claims that occurred in 2012. As such, any projection of the results of this data into the current claims environment involves estimates of the impact of differences in the legal and medical environment now as opposed to 2012. Therefore, any such projections are subject to economic and statistical variation. No assurances can be offered that the results of this claim study will be representative of today's conditions.

Other reliances and limitations and specific assumptions and data adjustments are cited in this report and in the attached exhibits that are an integral part of this report.

## Distribution and Use

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This report and the opinions expressed herein have been prepared for The City's internal use and for the support of the City's legislative efforts to authorize insurers to sell a D-Insurance product only. Further distribution of this report is not allowed without the express written consent of Pinnacle. Upon granting of such request, the report must be released in its entirety, and all recipients must be made aware that Pinnacle is the author of this report and is available to answer any questions.

Pinnacle does not assume any liability for the reliances of third parties on the conclusions of this report.

Any third parties receiving the report should recognize that the furnishing of this report is not a substitute for their own due diligence and should place no reliance on this report or the data contained herein that would result in the creation of any duty or liability by Pinnacle to the third party.

Any reference to Pinnacle in relation to this report in any accounts or other public documents or any verbal reference issued by The City is not authorized without our prior consent.

## Data

During the course of this review, Pinnacle has relied on the following data and information received from The City and the IRC:

1. Draft D-Insurance legislation dated May 20, 2015
2. Auto Injury Insurance Claims: Countrywide Patterns in Treatment, Cost and Compensation, 2014 Edition – Personal Injury Protection (PIP) and Bodily Injury (BI) Information for Michigan, New York, Florida, New Jersey and Massachusetts for claims that were closed in 2012
3. Citizens Research Council of Michigan, October 2013 report “Medical Costs of No-Fault Insurance.”
4. Michigan Chamber of Commerce, April 2011 study titled "The High Costs of Michigan's No-Fault Auto Insurance - Causes and Implications for Reform."
5. Michigan Automobile Insurance Placement Facility Base Rates effective January 1, 2015
6. Independent Statistical Services Automobile Experience Premium Data, calendar year 2013

The IRC data included 5,095 claims. The claims break down by state is shown below.

State	Number of Claims		
	BI	PIP	Grand Total
Florida	1,025	780	1,805
Massachusetts	421	159	580
Michigan	139	557	696
New Jersey	310	632	942
New York	317	755	1,072
<b>Grand Total</b>	<b>2,212</b>	<b>2,883</b>	<b>5,095</b>

From this IRC database 36 BI claims and 55 PIP claims occurred in Detroit. Due to the limited number of PIP claims in the IRC database, reform savings estimates were calculated for all IRC PIP claims in Michigan as well as separately for claims that occurred in the City of Detroit only as a reasonability check for savings estimates.

## Project Background

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By law, Michigan drivers must buy first-party medical insurance (also referred to as Personal Injury Protection or PIP) and residual liability coverage (Bodily Injury and Property Damage, BI-PD). Drivers are not legally required to buy collision and comprehensive coverage, but these coverages are required by lienholders if a driver has a car loan.

Statistical data filed with the Michigan Department of Insurance and Financial Services (DIFS) through the Independent Statistical Service (ISS) by some of the largest car insurance writers in Michigan, including Allstate, Auto Club, and State Farm, shows that in 2013, the average annual policy premium for PIP, BI-PD, and collision and comprehensive coverage in downtown Detroit was \$2,249.70. This was double the average annual premium in western Oakland County. It should be noted that this aggregate data is not adjusted to reflect the difference in the specific coverages purchased between the two areas. ISS data also shows that about 2/3 of policyholders in Detroit purchase full coverage, while almost 100% of policyholders in the Detroit suburbs purchase full coverage.

To support initiatives of the Mayor's office, The City would like to enact legislation authorizing The City to contract with insurance carriers to offer D-Insurance coverage. This coverage would be offered at a lower rate than currently available in the marketplace. This would be accomplished by introducing reforms to the Michigan insurance laws that would be applicable only to The City owned insurance company. The proposed reforms have been developed by the Mayor's office and are as follows:

1. Reform Proposal #1: The first reform proposal consists of two elements.
  - a. Introduce a \$25,000/\$250,000 limit: Currently, PIP benefits are unlimited. This change to the law would allow insureds to purchase PIP benefits with a specified limit of \$25,000, except in cases of necessary critical care, which would be additional coverage with a limit of \$250,000 per occurrence.
  - b. Allow insurers to negotiate preferred provider arrangements and pre-authorization: This would allow D-Insurance to create a limited provider network. Except for emergency services, the insurer may require a claimant to obtain products, treatment, services, accommodations, or rehabilitative or occupational therapy or training provided for under this act from a provider or supplier that is part of the limited provider network. The claimant may also need to obtain pre-authorization.
  
2. Reform Proposal #2 – High Deductible Option: This option would incorporate a high deductible option into the current unlimited PIP benefit program.

The attached exhibits and discussion below show the expected impact on insurance losses if these reforms are implemented.

## **Reform Proposal #1: PIP Benefit Limits and Preferred Provider Agreements**

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### **Introduce PIP Benefit Limits**

Currently, PIP benefits in Michigan are unlimited. One of the reforms being proposed is the introduction of PIP benefit limits. Specifically, the legislative changes being proposed are:

1. \$25,000 limit per person for benefits payable for medical expenses, work loss and replacement services.
2. An additional amount not to exceed \$250,000 in the aggregate, only for critical care for the person named in the Qualifying No-Fault Policy, the person's spouse, and a relative of either domiciled in the same household, who are injured in a single motor vehicle accident during the policy term. Critical care means treatment rendered at an acute care hospital or trauma center immediately following the motor vehicle accident, necessary to save the patient's life or treat life threatening or permanently disabling injuries, until the patient is stabilized. A patient is stabilized when the patient can safely be discharged or transferred to another acute care hospital or trauma center, rehabilitation or other facility, regardless of whether the patient is, in fact, discharged or transferred at that time. A Qualifying Insurer shall have the right to contest the charges of an acute-care facility under this section to the extent the Insurer can present competent evidence showing that the facility's charges relate to post-stabilization services.

To estimate the savings for this reform, Pinnacle applied the \$25,000 benefit limit to the individual PIP claims provided in the IRC database. Prior to the application of the limit, the medical non-critical care paid claim amounts were decreased by the estimated savings from the Preferred Provider Agreement reform (discussed below). After the application of the \$25,000 limit, if there were paid losses present on the claim for Emergency Room Doctors or Ambulance Care, these amounts were added to the losses that would be paid under the reform subject to the \$250,000 limit.

The estimated savings to the overall PIP costs solely from the application of the benefit limits is 62.1% for Detroit.

### **Preferred Provider Agreement**

This proposed change would allow an insurer to create a limited provider network. Except for emergency services, the insurer may require a claimant to obtain products, treatment, services, accommodations, or rehabilitative or occupational therapy or training provided for under this act from a provider or supplier that is part of the limited provider network. The claimant may also need to obtain pre-authorization for non-emergency services.

The limited provider network and pre-authorization would address two significant issues related to PIP coverage in Detroit. The first is that the charge for medical procedures paid under PIP is significantly higher than the charge for medical procedures paid under Worker's Compensation or Medicare. The second relates to overuse and potential abuse of PIP coverage.

For many common medical procedures, Michigan medical providers charge no-fault insurers two to five times more than rates charged for the same procedure by Medicare.<sup>1</sup> A table of medical procedures and associated reimbursements under No-Fault, Medicare and Worker's Compensation is shown in Attachment 1.

In addition, no-fault premiums in Michigan may also be inflated by overuse of benefits, the filing of fraudulent or excessive claims, and legal fees generated by excessive litigation. Typical patterns of fraud or overuse involve hard-to-verify injuries and large numbers of visits to providers of alternative medical therapies.<sup>2</sup>

The problem of overuse is particularly acute in Detroit, where

1. the average frequency of PIP claims in Detroit is twice the frequency in the suburbs (12 per 1,000 exposures vs. 6 per 1,000 exposures),
2. average severity of PIP claims in Detroit is roughly twice the average severity in the suburbs (\$59,000 vs \$30,000), and

The creation of a closed network with pre-authorization will provide the D-Insurance carrier with the ability to negotiate rates with medical providers, to limit excessive or unnecessary treatment and avoid litigation. Therefore, we believe that the ultimate rates negotiated would move in the direction of the Worker's Compensation schedule. As can be seen in Attachment 1, Worker's compensation medical provider reimbursements are 11% - 77% lower than reimbursements under PIP based on the type of medical procedure.

Pinnacle also performed a search for studies that estimated the cost savings associated with Preferred Provider systems. Though many of the studies are somewhat dated because Preferred Provider options were introduced roughly 15 – 20 years ago, Pinnacle did find a study by The Robert Wood Johnson Foundation<sup>3</sup> that provided savings estimates from introducing a PPO. The estimated savings from this study were 12 – 14%.

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<sup>1</sup> Citizens Research Council of Michigan, October 2013 report "Medical Costs of No-Fault Automobile Insurance," p. 7.

<sup>2</sup> Michigan Chamber of Commerce, April 2011 study titled "The High Costs of Michigan's No-Fault Auto Insurance - Causes and Implications for Reform," p. 17.

<sup>3</sup> Robert Wood Johnson Foundation. "Preferred Provider Organizations – Are They Better at Keeping Health Costs Down?" January 1, 2001.



To understand the potential savings based on implementation of preauthorization, thus decreasing fraud and over-utilization, Pinnacle reviewed the statistics related to PIP fraud in other states. In the IRC data, there are data fields that indicate whether a claim was referred to another agency for further investigation. For a specific claim, this field indicates whether or not a claim was referred to the insurance company's Special Investigative Unit (SIU), law enforcement, prosecutors or the National Insurance Crime Bureau (NICB). In addition, Pinnacle reviewed the severity of claims that were referred for further investigation versus those that were not referred.

Attachment 2 shows the claim referral rates by No-Fault state and the severity of non-referred vs. referred claims. For PIP, the referral rates for Michigan were 5.4% and for Detroit were 20%. The other states ranged in referral rates were 1.9% - 10.6%. The severity for non-referred claims for Michigan was about 62% lower than the severity for referred claims. For Detroit, the non-referred severity was 71% lower than the severity for referred claims. For the other states, the difference in severities ranged from 8.4% - 35% lower for non-referred claims. As a result, for PIP we can see that there is potential for savings based on the severity differences of referred vs. non-referred claims. Assuming an estimated 25% decrease in severity, for example, translates into estimated savings for PIP of 10.5%, as shown in Attachment 3.

Based on this combination of potential savings, we are estimating a 20% loss cost savings from implementing a limited provider network and preauthorization. This estimated savings applied only to the medical portion of the losses paid and assuming no other changes would result in a 13.9% estimated decrease in overall PIP loss costs. See Attachment 4 for more details.

## **Reform Proposal #2: High Deductible Option**

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This option would allow insureds to purchase PIP benefits subject to a deductible. Pinnacle estimated the savings from several deductible options - \$1,000, \$2,500 and \$5,000. For this option, the insured would be responsible for medical costs up the amount of the deductible.

To estimate the savings from these options, Pinnacle applied the deductible to each of the individual claims in the IRC data. As can be seen in Attachment 5, savings for the City of Detroit ranged from 3% to 13% based upon the deductible selected.

## **Total Estimated Savings – Reform Option #1**

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As can be seen in Attachment 6, the combined estimated loss savings for the limited provider network and the PIP benefit limit for the City of Detroit is estimated to be 64.5% of PIP claim costs. The reason the total savings does not equal the product of the individual savings estimates is due to the overlapping impact. Because of the \$25,000 PIP benefit limit, the impact of the limited provider network is dampened significantly.

The total estimated premium savings for the PIP reforms is shown in Attachment 7A.

To estimate the savings, Pinnacle began with the 2013 average premium by coverage in Detroit Metropolitan Inner (Territory 36) as calculated from the Automobile Experience Data from ISS. We then applied the estimated loss savings percentages (adjusted as described below) based on the reforms discussed. The overall estimated premium savings for a full coverage policy would be 25.8%, while the estimated savings for a liability only policy would be about 45.9%.

The cost estimates in this report are generally stated in terms of the impact on claim losses. The impact on claim losses cannot be used interchangeably with premium savings. This is because a portion of the insurance companies' expenses is for general overhead (rent, utilities, etc.) and would not decrease proportionately to the loss costs. Based on the 2013 Bests Aggregates and Averages publication, Private Passenger Automobile Liability general and other acquisition expenses represent 14.2% of the industry-wide written premium (this 14.2% does not include agents' commissions, premium taxes and other premium-related expenses). To estimate the premium savings corresponding to the cost savings shown in this report, it is necessary to reduce the loss savings by a factor of .858. Thus a 64.5% cost savings equates to an approximate 55.3% premium savings.

The savings calculated assume that current rates are adequate. To the extent that current PIP rates are inadequate, it is likely that the premium savings could be lower. We would also emphasize that the above percentage savings are averages for PIP coverage only. It is possible that actual savings could vary by area of Detroit, and also by the age and other rating characteristics of the covered driver(s), driving records, type and age of car, level and type of coverage and other factors.

In addition, these savings estimates assume no change to the tort threshold in Michigan and thus no associated increase in liability costs. To the extent that the liability threshold changes as a result of the PIP benefit limits and more liability claims are filed, this would lead to an increase in liability claim costs.

## **Total Estimated Savings – Reform Option #2**

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As can be seen in Attachment 5, the estimated loss savings for the high deductible option for the City of Detroit is estimated to be 3 - 13% of PIP claim costs depending on the limit chosen. The estimated savings generated by applying the benefit limits to all claims in Michigan are 5 - 18% of PIP claim costs.

The total estimated premium savings for the PIP reforms is shown in Attachment 8A and 8C. The overall estimated premium savings for a full coverage policy for a \$1,000 deductible would be 1.2%, while the estimated savings for a liability only policy would be about 2.2%. For the \$5,000 deductible, the estimated full coverage savings are 5.1%, and the liability only estimated savings are 9.1%.

## More Recent Data

As discussed above, Pinnacle’s analysis focuses on 2013 ISS premium data that suggests an “average” Detroit auto insurance vehicle premium in 2013 was \$2,250. That information excludes the effects of citizens of Detroit who drive without insurance. The City has provided anecdotal evidence that in 2015, many citizens of Detroit, including those with good driving records, pay premiums much higher than \$2,250.

Pinnacle has obtained recent information from the Michigan Automobile Insurance Placement Facility (Facility). The Facility acts as an insurer of last resort for individuals who cannot secure no-fault coverage in the open market. The Facility sets its “base rate” premiums as the average of the top five insurance carriers in the state. Base rates represent the premiums charged prior to the application of any discounts or surcharges. Most drivers seeking coverage from the Facility will pay premiums higher than the base rates as a result of underwriting factors such as age, driving record, mileage, etc.

The Facility’s most recent annual base rate average premium data for Detroit is as follows:

<u>Coverage</u>	<u>Premiums Per Year</u>
Bodily Injury Liability	\$468
Property Damage Liability	48
Property Protection	142
Personal Injury Protection	4,134
Collision (\$100 Deductible)	1,126
<u>Comprehensive (\$100 Deductible)</u>	<u>310</u>
Total	\$6,228

Using this data, and assuming a 55.3% savings on the PIP premium (based on Reform Option 1 - PIP limit option), the owner would save approximately \$2,286 bringing the premium down from \$6,228 to \$3,940 – an all coverage savings on the policy of 37%.

Depending on the age and value of the vehicle, it might be economically wise for an owner to select a larger deductible for collision and comprehensive coverage or elect not to obtain collision and comprehensive coverage. If collision and comprehensive coverage is eliminated, the annual premium under the current no-fault law would be \$4,792. A 55.3% savings on PIP would decrease the price of the policy down to \$2,504, or a decrease of 48%. The details are shown in Attachment 7B.

The estimated savings for Reform Option 2 based on the MAIPF base rates are shown in 8B and 8D. For the \$1,000 deductible option, the full coverage savings are 1.8% and the liability only savings are 2.3%.

Using the \$5,000 deductible option, the full coverage savings are 7.3% and the liability only savings are 9.5%.

The City has also provided to Pinnacle the following 2015 hypothetical rate example as an example of the types of savings that can be achieved. The hypothetical case study comes from a major auto insurer that offers insurance premium quotations on-line. A representative of The City entered the following details:

- An address in northeast Detroit in the 48225 zip code
- 2005 Chevy Malibu
- 10,000 miles driver per year
- Vehicle used to commute to work and for pleasure
- Basic coverage including the mandatory no-fault insurance coverages together with comprehensive (theft) and collision coverage with \$1,000 deductibles.

The following quotation was provided for a one year policy:

<u>Coverage</u>	<u>Premium Per Year</u>
Bodily Injury Liability	\$260
Property Damage Liability	24
Property Protection	60
Personal Injury Protection	3,332
Collision	1,042
<u>Comprehensive</u>	<u>234</u>
Total	\$4,952

Using this example, and assuming a 55.3% cost savings on the PIP premium, the owner would save approximately \$1,844 reducing the premium from \$4,952 to \$3,108.

If the owner in this example elected not to obtain collision and comprehensive coverage, the annual premium under current no-fault law would be \$3,676. A 55.3% savings on PIP would produce a savings of \$1,844, decreasing the price of the policy to \$1,832. Details are shown in Attachment 7C.

## Conclusion

As shown above, implementing reform that limits PIP benefits will provide significant premium savings to the citizens of Detroit. The most significant changes would be achieved with the implementation of

Reform Option #1. While the actual savings would vary depending on the specific policy circumstances, the estimated average savings from this option would a decrease in premiums of 25.8% for a full coverage policy, and 45.9% for a liability only policy.

## Index of Attachments

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1. Limited Provider Network Savings Estimate
2. PIP Fraud Referral Rates
3. Potential Savings from Fraud Mitigation
4. Preferred Provider Cost Savings Estimate
5. High Deductible Option Savings Estimate
6. PIP Limit and Limited Provider Network Savings Estimate
7. Premium Savings Calculation – PIP Limit and Limited Provider Network Option
  - a. Savings Estimates Based on 2013 ISS Average Premiums
  - b. Savings Estimates Based on 2015 MAIPF Base Rates
  - c. Savings Estimates Based on Hypothetical Quote Example
8. Premium Savings Calculation – High Deductible Option
  - a. Savings Estimates Based on 2013 ISS Average Premiums, \$1,000 Deductible Option
  - b. Savings Estimates Based on 2015 MAIPF Base Rates, \$1,000 Deductible Option
  - c. Savings Estimates Based on 2013 ISS Average Premiums, \$5,000 Deductible Option
  - d. Savings Estimates Based on 2015 MAIPF Base Rates, \$5,000 Deductible Option

**City of Detroit  
Insurance Reform Pricing  
Medical Procedure Reimbursement Amounts**

Procedure Code	Description	No Fault Reimbursement - Detroit	Medicare Reimbursement	Work Comp
97110	Therapeutic exercises for strength (each 15 minutes); usually charged by Physical Therapist	79.38	30.66	41.57
98941	Chiropractic manipulative treatment, spinal, 3 - 4 regions	72.60	36.43	48.67
97140	Manual therapy (each 15 minutes) - physical therapy	60.80	28.91	38.03
97014	Electrical stimulation - physical therapy	56.05	13.20	19.27
97124	Massage (each 15 minutes) - physical therapy	52.36	25.07	32.96
99284	Emergency department visit; severe medical complexity	443.68	124.98	170.35
99283	Emergency department visit; moderate medical complexity	297.04	65.70	90.75
98940	Chiropractic manipulative treatment, spinal, 1 - 2 regions	56.47	25.94	34.98
99213	Office visit, established patient; typically 15 minutes	104.40	72.84	89.23
97012	Mechanical traction - physical therapy	56.94	15.99	20.79
97035	Ultrasound (each 15 minutes) - physical therapy	66.26	12.50	16.73
99214	Office visit, established patient; typically 25 minutes	151.30	107.90	133.85
97530	Therapeutic activities, improve functional performance (each 15 minutes); generally charged by Occupational Therapists	53.72	33.44	43.10
97112	Neuromuscular re-education (each 15 minutes) - physical therapy	77.69	32.05	42.08
72040	X-ray, spine, cervical; 2 or 3 views	161.96	41.59	54.76
72125	CT Scan - Neck	1,820.09	261.50	418.78
72141	MRI - Neck	3,258.68	483.98	769.63
72148	MRI - Low Back	3,278.55	484.31	765.57
72193	CT Scan - Pelvis	1,828.04	305.65	477.59
72050	X-Ray - Spine	227.55	55.89	77.06
29826	Surgery - Shoulder	2,806.13	730.70	939.98

Potential Savings	
Medicare Reimbursement	Work Comp
-61.4%	-47.6%
-49.8%	-33.0%
-52.5%	-37.5%
-76.4%	-65.6%
-52.1%	-37.1%
-71.8%	-61.6%
-77.9%	-69.4%
-54.1%	-38.1%
-30.2%	-14.5%
-71.9%	-63.5%
-81.1%	-74.8%
-28.7%	-11.5%
-37.8%	-19.8%
-58.7%	-45.8%
-74.3%	-66.2%
-85.6%	-77.0%
-85.1%	-76.4%
-85.2%	-76.6%
-83.3%	-73.9%
-75.4%	-66.1%
-74.0%	-66.5%

Source: Mitchell DecisionPoint; CRC Calculations

**City of Detroit  
Insurance Reform Pricing  
Preferred Provider Organization**

**Personal Injury Protection**

**Claim Referral Rate**

State	Claim Referral Rate								
	Total	SIU	Other Company	NICB	State Fraud	Local Police	Prosecutor	Other	
Florida	3.8%	3.2%	0.0%	0.4%	0.0%	0.0%	0.0%	0.3%	
Massachusetts	1.9%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Michigan	5.4%	4.1%	0.9%	0.0%	0.0%	0.0%	0.0%	0.4%	
New Jersey	10.6%	10.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
New York	7.0%	6.1%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	
Detroit	20.0%	18.2%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	

Non-Referred Severity	Referred Severity	Difference
7,330	8,001	-8.4%
3,608	5,547	-35.0%
14,121	36,844	-61.7%
16,000	20,655	-22.5%
8,743	12,827	-31.8%
17,880	61,477	-70.9%



**City of Detroit  
Insurance Reform Pricing  
Fraud Investigation**

		<b>Personal Injury Protection</b>	
		<b>State of Michigan</b>	<b>City of Detroit</b>
<b>(1)</b>	Estimated Increase in Claim Referral Rate	0.0%	0.0%
<b>(2)</b>	Estimated Decrease in Severity for Referred Claims	25.0%	25.0%
<b>(3)</b>	IRC Total Paid Losses for Referred Claims	1,105,306	676,247
<b>(4)</b>	IRC Total Paid Losses	7,969,097	1,613,067
<b>(5)</b>	Savings as a Percentage of Total Losses	3.5%	10.5%

Notes

- (1)** Estimate Based on IRC Fraud Analysis Exhibit
- (2)** Estimate Based on IRC Fraud Analysis Exhibit
- (3)** IRC: Auto Injury Insurance Claims: Countrywide Patterns in Treatment, Costs, and Compensation, 2014 Edition
- (4)** IRC: Auto Injury Insurance Claims: Countrywide Patterns in Treatment, Costs, and Compensation, 2014 Edition
- (5)**  $[(2) * (3)] / (4) + (1)$

**City of Detroit  
Insurance Reform Pricing  
Preferred Provider**

		<b>State of Michigan</b>	<b>City of Detroit</b>
<b>(1)</b>	PPO Savings Estimate	20.0%	
<b>(2)</b>	Total PIP Medical Paid	4,559,642	1,120,411
<b>(3)</b>	IRC Total Paid Losses	7,969,097	1,613,067
<b>(4)</b>	PIP Savings as a Percentage of Total Losses	11.4%	13.9%

Notes

- (1)** Estimated Impact of Preferred Provider and Preauthorization
- (2)** IRC: Auto Injury Insurance Claims: Countrywide Patterns in Treatment, Costs, and Compensation, 2014 Edition
- (3)** IRC: Auto Injury Insurance Claims: Countrywide Patterns in Treatment, Costs, and Compensation, 2014 Edition
- (4)**  $[(1) * (2)] / (3)$

**City of Detroit  
Insurance Reform Pricing  
High Deductible Option**

	Deductible Impact	
	State of	City of
Deductible	Michigan	Detroit
1,000	-5.1%	-3.1%
2,500	-10.6%	-7.1%
5,000	-17.5%	-12.8%

**City of Detroit**  
**Insurance Reform Pricing**  
**Impact of 25,000 PIP Limit / \$250,000 Emergency Care Limit and Limited Provider Network**

**State of Michigan**

<b>(1)</b>	Original Paid Losses	7,969,097
<b>(2)</b>	Revised Paid Losses	3,646,820
<b>(3)</b>	Savings Estimate	-54.2%

**City of Detroit**

<b>(4)</b>	Original Paid Losses	1,613,067
<b>(5)</b>	Revised Paid Losses	572,548
<b>(6)</b>	Savings Estimate	-64.5%

- (1)** IRC: Auto Injury Insurance PIP Claims Data  
**(2)** Estimated Revised Losses Assuming \$25,000 PIP Limit / \$250,000 Limit for Emergency Care and Limited Provider Network  
**(3)** (2) / (1) - 1  
**(4)** IRC: Auto Injury Insurance PIP Claims Data  
**(5)** Estimated Revised Losses Assuming \$25,000 PIP Limit / \$250,000 Limit for Emergency Care and Limited Provider Network  
**(6)** (5) / (4) - 1

**City of Detroit**  
**Insurance Reform Pricing**  
**Estimated Savings - \$25,000/\$250,000 Limit Option Using 2013 ISS Average Premiums**

	(1)	(2)	(3)	(4)	(5)
Coverage	2013 ISS Average Premium	Total Loss Savings	Estimated Premium Savings	Estimated New Premium	Estimated Overall Percentage Savings
BI	\$163.08	0.0%	0.0%	163.08	
PD	\$19.24	0.0%	0.0%	19.24	
PIP	\$1,105.55	-64.5%	-55.3%	493.67	
PPI	\$44.20	0.0%	0.0%	44.20	
Collision	\$664.79	0.0%	0.0%	664.79	
Comprehensive	\$374.43	0.0%	0.0%	374.43	
<b>Full Coverage</b>	<b>\$2,371.28</b>			<b>\$1,759.41</b>	<b>-25.8%</b>
<b>Liability Only</b>	<b>\$1,332.07</b>			<b>\$720.19</b>	<b>-45.9%</b>

- (1) Independent Statistical Service, Inc, Automobile Experience, Average Premiums for Detroit Metropolitan Inner (Territory 36)  
(2) Attachment 5  
(3) (3) \* 0.858 (Portion of Premiums that are Variable)  
(4) (1) \* [1 + (3)]  
(5) [ (4) Total / (1) Total ] - 1

**City of Detroit**  
**Insurance Reform Pricing**  
**Estimated Savings - \$25,000/\$250,000 Limit Option Using 2015 MAIPF Base Rates**

	(1)	(2)	(3)	(4)	(5)
Coverage	2015 MAIPF Base Rates	Total Loss Savings	Estimated Premium Savings	Estimated New Premium	Estimated Overall Percentage Savings
BI	\$468.00	0.0%	0.0%	468.00	
PD	\$48.00	0.0%	0.0%	48.00	
PIP	\$4,134.00	-64.5%	-55.3%	1846.00	
PPI	\$142.00	0.0%	0.0%	142.00	
Collision	\$1,126.00	0.0%	0.0%	1126.00	
Comprehensive	\$310.00	0.0%	0.0%	310.00	
<b>Full Coverage</b>	<b>\$6,228.00</b>			<b>\$3,940.00</b>	<b>-36.7%</b>
<b>Liability Only</b>	<b>\$4,792.00</b>			<b>\$2,504.00</b>	<b>-47.7%</b>

- (1) Michigan Auto Insurance Placement Facility Base Rates, 01-01-15, Territory 36 - 37  
(2) Attachment 5  
(3) (3) \* 0.858 (Portion of Premiums that are Variable)  
(4) (1) \* [1 + (3)]  
(5) [ (4) Total / (1) Total ] - 1

**City of Detroit  
Insurance Reform Pricing  
Estimated Savings - \$25,000/\$250,000 Limit Option Using Hypothetical Rate Quote**

	(1)	(2)	(3)	(4)	(5)
Coverage	Hypothetical Quote Annual Premium	Total Loss Savings	Estimated Premium Savings	Estimated New Premium	Estimated Overall Percentage Savings
BI	\$260.00	0.0%	0.0%	\$260.00	
PD	\$24.00	0.0%	0.0%	\$24.00	
PIP	\$3,332.00	-64.5%	-55.3%	\$1,487.88	
PPI	\$60.00	0.0%	0.0%	\$60.00	
Collision	\$1,042.00	0.0%	0.0%	\$1,042.00	
Comprehensive	\$234.00	0.0%	0.0%	\$234.00	
<b>Full Coverage</b>	<b>\$4,952.00</b>			<b>\$3,107.88</b>	<b>-37.2%</b>
<b>Liability Only</b>	<b>\$3,676.00</b>			<b>\$1,831.88</b>	<b>-50.2%</b>
					\$1,844.12

- (1) Michigan Auto Insurance Placement Facility Base Rates, 01-01-15, Territory 36 - 37
- (2) Attachment 5
- (3) (3) \* 0.858 (Portion of Premiums that are Variable)
- (4) (1) \* [1 + (3)]
- (5) [ (4) Total / (1) Total ] - 1

**City of Detroit**  
**Insurance Reform Pricing**  
**Estimated Savings - High Deductible Option Using 2013 ISS Average Premiums**  
**\$1,000 Deductible Option**

	(1)	(2)	(3)	(4)	(5)
Coverage	2013 ISS Average Premium	Total Loss Savings	Estimated Premium Savings	Estimated New Premium	Estimated Overall Percentage Savings
BI	\$163.08	0.0%	0.0%	\$163.08	
PD	\$19.24	0.0%	0.0%	\$19.24	
PIP	\$1,105.55	-3.1%	-2.7%	\$1,076.19	
PPI	\$44.20	0.0%	0.0%	\$44.20	
Collision	\$664.79	0.0%	0.0%	\$664.79	
Comprehensive	\$374.43	0.0%	0.0%	\$374.43	
<b>Full Coverage</b>	<b>\$2,371.28</b>			<b>\$2,341.92</b>	<b>-1.2%</b>
<b>Liability Only</b>	<b>\$1,332.07</b>			<b>\$1,302.71</b>	<b>-2.2%</b>

(1) Independent Statistical Service, Inc, Automobile Experience, Average Premiums for Detroit Metropolitan Inner (Territory 36)

(2) Attachment 4 (\$1,000 Deductible Option Savings)

(3) (3) \* 0.858 (Portion of Premiums that are Variable)

(4) (1) \* [1 + (3)]

(5) [ (4) Total / (1) Total ] - 1



City of Detroit  
Insurance Reform Pricing  
Estimated Savings - High Deductible Option Using 2015 MAIPF Base Rates  
\$1,000 Deductible Option

	(1)	(2)	(3)	(4)	(5)
Coverage	2015 MAIPF Base Rates	Total Loss Savings	Estimated Premium Savings	Estimated New Premium	Estimated Overall Percentage Savings
BI	\$468.00	0.0%	0.0%	\$468.00	
PD	\$48.00	0.0%	0.0%	\$48.00	
PIP	\$4,134.00	-3.1%	-2.7%	\$4,024.22	
PPI	\$142.00	0.0%	0.0%	\$142.00	
Collision	\$1,126.00	0.0%	0.0%	\$1,126.00	
Comprehensive	\$310.00	0.0%	0.0%	\$310.00	
<b>Full Coverage</b>	<b>\$6,228.00</b>			<b>\$6,118.22</b>	<b>-1.8%</b>
<b>Liability Only</b>	<b>\$4,792.00</b>			<b>\$4,682.22</b>	<b>-2.3%</b>

(1) Independent Statistical Service, Inc, Automobile Experience, Average Premiums for Detroit Metropolitan Inner (Territory 36)

(2) Attachment 4 (\$1,000 Deductible Option Savings)

(3) (3) \* 0.858 (Portion of Premiums that are Variable)

(4) (1) \* [1 + (3)]

(5) [ (4) Total / (1) Total ] - 1

City of Detroit  
Insurance Reform Pricing  
Estimated Savings - High Deductible Option Using 2013 ISS Average Premiums  
\$5,000 Deductible Option

	(1)	(2)	(3)	(4)	(5)
Coverage	2013 ISS Average Premium	Total Loss Savings	Estimated Premium Savings	Estimated New Premium	Estimated Overall Percentage Savings
BI	\$163.08	0.0%	0.0%	\$163.08	
PD	\$19.24	0.0%	0.0%	\$19.24	
PIP	\$1,105.55	-12.8%	-11.0%	\$983.96	
PPI	\$44.20	0.0%	0.0%	\$44.20	
Collision	\$664.79	0.0%	0.0%	\$664.79	
Comprehensive	\$374.43	0.0%	0.0%	\$374.43	
<b>Full Coverage</b>	<b>\$2,371.28</b>			<b>\$2,249.70</b>	<b>-5.1%</b>
<b>Liability Only</b>	<b>\$1,332.07</b>			<b>\$1,210.48</b>	<b>-9.1%</b>

- (1) Independent Statistical Service, Inc, Automobile Experience, Average Premiums for Detroit Metropolitan Inner (Territory 36)  
(2) Attachment 4 (\$5,000 Deductible Option Savings)  
(3) (3) \* 0.858 (Portion of Premiums that are Variable)  
(4) (1) \* [1 + (3)]  
(5) [ (4) Total / (1) Total ] - 1

City of Detroit  
Insurance Reform Pricing  
Estimated Savings - High Deductible Option Using 2015 MAIPF Base Rates  
\$5,000 Deductible Option

	(1)	(2)	(3)	(4)	(5)
Coverage	2015 MAIPF Base Rates	Total Loss Savings	Estimated Premium Savings	Estimated New Premium	Estimated Overall Percentage Savings
BI	\$468.00	0.0%	0.0%	\$468.00	
PD	\$48.00	0.0%	0.0%	\$48.00	
PIP	\$4,134.00	-12.8%	-11.0%	\$3,679.35	
PPI	\$142.00	0.0%	0.0%	\$142.00	
Collision	\$1,126.00	0.0%	0.0%	\$1,126.00	
Comprehensive	\$310.00	0.0%	0.0%	\$310.00	
<b>Full Coverage</b>	<b>\$6,228.00</b>			<b>\$5,773.35</b>	<b>-7.3%</b>
<b>Liability Only</b>	<b>\$4,792.00</b>			<b>\$4,337.35</b>	<b>-9.5%</b>

- (1) Independent Statistical Service, Inc, Automobile Experience, Average Premiums for Detroit Metropolitan Inner (Territory 36)  
(2) Attachment 4 (\$5,000 Deductible Option Savings)  
(3) (3) \* 0.858 (Portion of Premiums that are Variable)  
(4) (1) \* [1 + (3)]  
(5) [ (4) Total / (1) Total ] - 1