COMMENTS ON THE

PRELIMINARY REGUATORY IMPACT ANALYSIS

FOR THE NOTICE OF PROPOSED RULEMAKING

REPLACEMENT TIRE CONSUMER INFORMATION PROGRAM

PART 575.106

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1.0 EXECUTIVE SUMMARY

Environomics was retained by the Rubber Manufacturers Association (RMA) to review the National Highway Transportation Safety Administration's (NHTSA's) Preliminary Regulatory Impact Analysis (PRIA) for the Notice of Proposed Rulemaking for the Replacement Tire Consumer Information Program.

This Executive Summary provides an overview of Environomics' primary findings regarding the PRIA and describes the organization of the remainder of this report.

1.1. OVERVIEW OF PRIMARY FINDINGS

1.1.1. Substantial uncertainties and gaps in the PRIA undermine confidence in NHTSA's conclusions regarding the proposed program. NHTSA has demonstrated the ability to address these gaps for other regulations, and should do so here also.

Overall, the PRIA is replete with substantial uncertainties regarding the effectiveness, benefits and costs of the replacement tire consumer information program. Some of these uncertainties are unavoidable, but some result from NHTSA's failure to perform analyses for the proposed rule that it has performed for other regulations. NHTSA should perform these analyses.

- Some uncertainty can be expected, since the regulation establishes an information program rather than setting an explicit performance standard. It is not clear how many consumers will obtain the information to be provided, and it is substantially uncertain how the decisions of those who receive it will be affected.

- However, other aspects of this uncertainty result from the failure of the PRIA to fully analyze aspects of costs and benefits that NHTSA is capable of analyzing, including aspects that NHTSA has analyzed for other regulations such as the benefits or disbenefits of potential changes in wet weather traction and treadwear. Other NHTSA RIAs suggest that the impact of this rule on safety could be substantial.

1.1.2. The PRIA relies heavily on assumptions that significantly affect the benefit cost analysis, some of which have no basis or are based on flawed logic.

While the PRIA is clear when assumptions are made, it often does not provide support for the assumptions or perform enough sensitivity analysis or analysis of alternative scenarios to demonstrate that the PRIA's conclusions are robust.

In some instances, the chosen assumption has a flawed basis or contradicts other findings in the PRIA or the proposed rule preamble, such as the assumed much higher potential effectiveness of the 0-100 scale system relative to the star/bin system. In other instances the chosen assumption does not appear to mesh with the requirements of the proposed rule, such as the assumptions applied in estimating the cost of testing as needed to comply with NHTSA's proposed tolerance band approach.

1.1.3. The positive net benefits suggested in the PRIA are relatively small. Consequently, the estimated net benefits of the regulation could easily change from positive to negative upon a more complete analysis that includes potential disbenefits that were not quantified in the PRIA.

Based on analyses that NHTSA has performed for other regulations, the magnitude of potential disbenefits that have not been quantified in the PRIA (e.g., related to tradeoffs involving wet traction and treadwear) could easily outweigh the positive net benefits that are estimated in the PRIA for fuel efficiency. Consequently, in addition to performing a more complete analysis as discussed in Section 1.1.2, NHTSA should give careful attention to program design decisions that could adversely impact the net benefits of the program, as discussed in Section 1.1.5.

1.1.4 RMA estimates costs for testing, reporting and labels that substantially exceed NHTSA's cost estimates in the PRIA. Costs as RMA estimates them likely exceed the rule's fuel efficiency benefits.

Based on a recent survey of its eight tire manufacturing companies, RMA estimates a cost for testing, reporting and labels that exceeds NHTSA's estimate by a factor of roughly 3 to 6. RMA estimates higher costs mostly because: a) NHTSA has omitted some necessary sorts of compliance activities from its analysis; and b) Tire manufacturers foresee a greater need for testing and less frequent use of modeling or extrapolation in order to develop ratings with sufficient precision to avoid violating NHTSA's proposed tolerance bands. RMA's cost estimates for the consumer information program generally exceed NHTSA's benefit estimates, and hence net benefits of the program could be negative even without consideration of the not-yet-quantified potential disbenefits (as discussed above).

1.1.5. To increase the likelihood that benefits will exceed costs for this rule, and to avoid inadvertently increasing potential disbenefits, it is important for the design of the rule to be as efficient, effective and balanced as possible.

There are several design considerations that can have a significant impact on the costs and benefits of the rule:

- Testing should be kept to a necessary minimum. For example, the precision of tire ratings implied by label design should reflect the realities of rating uncertainties and should not unnecessarily drive up testing and rating costs. Furthermore, the testing requirements and associated costs for tire manufacturers implied by NHTSA's compliance program should be fully reflected in the estimated cost of the rule. As discussed in Section 3 of this report, NHTSA substantially underestimates the costs of testing and reporting.

- Information requirements for labels should be limited to information that is justified. For example, information requirements that drive up label costs (such as the week of tire manufacture) should be carefully evaluated to determine whether the benefit of that information justifies its additional cost. Both the PRIA and RMA's cost analysis find that labeling costs represent a substantial fraction of the cost of the rule, and even small changes in these costs can be material, especially in view of the relatively small positive net benefits that the PRIA estimates for the proposed rule.

- Taking a broader view, the entire consumer information program should be designed to get information to replacement tire purchasers at a time and in a manner that is helpful in their making decisions. It is not at all clear that a new label that is required to be affixed to tires, but which few potential purchasers are ever likely to see in practice, is a cost-effective way of meeting this information goal. Some of the substantial cost of the new labeling program might better be spent on other more effective means of communicating tire rating information to potential purchasers. Such possibilities might include training and materials aimed at enhancing the interaction between tire dealer personnel and customers, web-based applications that provide comparative rating information on the particular replacement tires available to a customer at a particular site and time and suited for the customer's vehicle, and the like. To increase the effectiveness of the rule, NHTSA should think broadly and creatively about making tire rating information available to consumers at the time when it matters to them by means in addition to or other than labels.

- NHTSA should work creatively to design broadly effective consumer information programs in response to the EISA mandates. There appears to be much more to gain in educating consumers about appropriate tire maintenance than in providing them with information regarding purchase of replacement tires. NHTSA's relative effort in establishing the two consumer information programs and in establishing regulatory requirements that entail significant compliance costs should reflect this priority.

- Consumers should receive complete information about tire characteristics and their tradeoffs (viz., fuel efficiency, wet traction and treadwear) to help avoid inadvertently increasing disbenefits. If a single, combined rating is provided, it should augment and not replace the individual ratings for the three tire characteristics. Each consumer should have the benefit of the information for each of these factors to make an informed choice that is appropriate for them.

To the extent these steps are taken to make all aspects of the rule (including testing requirements, labeling requirements, compliance requirements, and the overall consumer information program)

efficient, effective and balanced, they may be sufficient to address concerns about unnecessarily high costs or potentially high disbenefits.

1.2 ORGANIZATION OF THIS REPORT

This report is organized as follows:

Section 2 **Relative Effectiveness of Labels**

Section 3 **Realistic Estimates of Testing and Label Costs**

Section 4 **Full Analysis of Costs and Benefits**

Section 5 **Additional Information Provided to Consumers**

2. RELATIVE EFFECTIVENESS OF LABELS

NHTSA assumes that label Alternative 1 (thumbs up/thumbs down) will increase sales of lower rolling resistance tires by 1%; that label Alternative 2 (stars/bins ratings) will increase such sales by 2%; and that the Proposed label (0-100 rating system) will increase such sales by 2-10% -- up to five times more than the star/bin system. The two primary reasons stated in the PRIA for this set of assumptions are that:

- The focus group preferred the 0-100 rating system over the stars/bins system.

- The PRIA assumes that manufacturers will make greater effort to improve the rolling resistance of tires under the 0-100 rating system label than under the stars/bins label. The PRIA asserts under the 0-100 system that manufacturers have an incentive to improve their tires as much as possible, and assumes that the additional tires with improved rolling resistance that are sold as a result of the consumer information program will be 10 percent better in terms of rolling resistance. In contrast, under the stars/bin system, the PRIA asserts that manufacturers will improve tire rolling resistance only enough to move their tires "just over the margin" (i.e., only as much as is needed to move them into the next better bin), and the PRIA assumes that the average improvement in rolling resistance for such tires will be only 5 – 10 percent.

We see three sets of issues regarding the PRIA's assumptions regarding the relative effectiveness of the label designs:

1. There appears to be no valid basis for the assumptions regarding the impact of the label designs on consumer choice and demand, especially for the substantial increase in demand for tire fuel efficiency assumed for the 0-100 rating system relative to the star/bin system. This assumption does not appear justified by the results of the focus group study.

2. The PRIA's assertion is inaccurate that the 0-100 rating system would result in more manufacturer effort than the star/bin system to improve tire rolling resistance, and that this would result in more purchases of improved rolling resistance tires. Moreover, the discussion in the NPR regarding the compliance program contradicts the PRIA's assumption regarding manufacturer behavior.

3. The PRIA seems to confuse incentives to manufacturers and their behavior, with information provided to consumers and their behavior.

In addition, the PRIA fails to recognize that:

1. Differences in consumer preferences regarding different label designs don't necessarily translate into corresponding changes in purchasing behavior; and,

2. The new label will provide information about wet traction and treadwear in addition to fuel efficiency, and this could result in various possible shifts in consumer demand for replacement tires including, for example, reductions in purchase of fuel efficient tires and increase in purchase of tires with better wet traction, or vice versa.

These considerations deserve careful analysis in the PRIA.

2.1 No Basis To Assume That the 0-100 System Will Outperform the Star/Bin System

2.1.1. The PRIA Does Not Provide Information to Support a Measurable Difference in Label Performance

The results of the focus group study do not appear to us to justify NHTSA's assumption that the 0-100 rating system label will produce up to five times more sales of lower rolling resistance tires than will result from the stars/bin system label. The PRIA makes essentially only three points regarding the comparison between these two potential labels.

First, the PRIA acknowledges that the focus group responses can't be generalized or provide a basis for accurate quantitative projections, especially within accurate statistical ranges (page 69).

> "…Note that the results from the focus group cannot be generalized, and this approach is preliminary. Qualitative research, by design is not meant to be projectable within accurate statistical ranges. … It is also true that what matters most is what approach best informs consumer choices, not what approach is preferred in a focus group setting."

Second, the PRIA reports (page 71) that the focus group participants were "familiar with and reacted positively to" the stars/bins rating system.

Third, the PRIA reports (page 72) that the 0-100 rating system label was "by far the most preferred", mostly because of the greater discrimination of the 0-100 scale relative to the stars/bins system that included only 5 possible ratings for each tire attribute.

These results reported in the PRIA do not justify the PRIA's assumption that the 0-100 rating system would result in a measurable increase in consumer demand for higher fuel efficiency tires relative to demand for them under the star/bin system, let alone a five-fold advantage.

In our view, there is no basis for assuming that the 0-100 rating system will result in different consumer choices than a star/bin system. This conclusion is further substantiated by the additional points discussed in the remainder of this Section.

2.1.2 The PRIA Makes Incorrect Assumptions about Manufacturer Behavior

Manufacturers will offer consumers tires that have the characteristics that consumers want. The PRIA essentially makes the opposite assumption: that the star/bin label system will induce manufacturers to make fewer tires with better rolling resistance than the 0-100 rating system by slightly improving rolling resistance to push tires just barely into the next bin, and this reduction in tire offerings with materially improved rolling resistance will not meet consumer demand for such tires. Importantly, this assumption in the PRIA about manufacturer behavior is contradicted

by the proposed rule preamble which instead expresses concern about manufacturers under-rating their tires to assure compliance regarding the accuracy of their ratings.

In addressing the impact of the labeling system on the supply of low rolling resistance tires, the PRIA argues that the star/bin approach might not result in a full 10% improvement in rolling resistance because manufacturers might game the rating system by improving rolling resistance only as much as would be needed to push a tire's rating just barely into the next better bin; presumably a lesser amount than a 10% improvement. The PRIA states this hypothesis regarding manufacture response to the star/bin system as "manufacturers might not have an incentive to change their tires the full 10 percent in rolling resistance, because they might try to mover their tires just over the margin to get the better rating" (page 77).

We believe this hypothesis about manufacturer behavior is incorrect. The inherent uncertainties in testing tires (as discussed in the PRIA) combined with NHTSA's compliance program and noncompliance penalties (as discussed in the preamble) along with the negative publicity associated with noncompliance provide strong incentives to manufactures to avoid (rather than seek) designing a tire that performs "just over the margin" into a better bin and rating this tire accordingly. To the contrary, we believe that the penalties a manufacturer can suffer as a result of classifying a tire in a bin better than what NHTSA's testing subsequently validates will cause manufacturers to under-grade a tire that performs "just over the margin". Instead of designing a tire that is "just over the margin" and (at great risk) claiming credit for that better grade, we believe that a manufacturer will instead seek to design a tire that is solidly "over the margin" so that credit for that better grade can be claimed confidently, with little likelihood of NHTSA subsequently disagreeing.

Moreover, the preamble to the proposed rule apparently agrees with our assessment, going into some length (page 29579) asking for comment on whether non-compliance should include cases where the manufacturer reports a rating that is below the level that NHTSA estimates based on its compliance test. The concern that NHTSA expresses in the preamble is that manufacturers might underrate tires in order to assure compliance. This is currently allowed under the UTQGS, in which "tires that perform near a performance level that would allow a higher traction grade, the regulation allows the manufacturer to 'underrate' to allow for the possibility that NHTSA might select a tire for compliance testing that would perform at a lower level. ….NHTSA is also seeking comment on whether to consider non-compliance to exist when NHTSA's test value results in a rating that is outside the tolerance band, but is higher than the rating reported by the tire manufacturer."

Further, the data on wet traction obtained in the NHTSA Phase 2 testing and reported in the PRIA provide no evidence that manufacturers currently design tires to get "just over the margin", at least regarding Traction Grade. This testing shows only 3 of 16 tires as "just over the margin" regarding sliding value on asphalt (Figure III-16, page 50) and only 2 of 16 as "just over the margin" for concrete surfaces (Figure III-17, page 51).[1] And, contrary to the PRIA's belief that

[1] We define "just over the margin" as within one point above the slide number required for the next higher Traction Grade. For asphalt surface, tires "just over the margin" into A Traction Grade are those with slide number between 47 and 48 and those "just over the margin" into AA Traction Grade are those with slide number between 54 and 55. For concrete surface, tires "just over the margin" into A Traction Grade are those with slide number between 35 and 36 and those "just over the margin" into AA Traction Grade are those with slide number between 41 and 42.

manufacturers will game the rating system, 2 of the 16 tires in asphalt testing and 4 of the 16 tires in concrete testing are "just under the margin" – just short of the performance required to move them up to the next better Traction Grade. Developing a tire that performs "just under the margin" is something that manufacturers would not do if the PRIA's belief were correct.

2.1.3 The PRIA Confuses Manufacturer Behavior with Consumer Behavior

In addition to incorrectly postulating manufacturer behavior, the PRIA appears to confuse two issues: 1) the impact of the label information on consumer choice (and the resulting change in consumer demand for tires with better rolling resistance); and 2) incentives to manufacturers to provide tires with better rolling resistance.

The PRIA starts by discussing the thumbs up/thumbs down label system and its "impact of informing consumers and having them buy more fuel efficient tires." (page 77) However, the PRIA's discussion regarding the star and the scale systems then quickly changes focus from consumer impact to the impact of the label design on the decisions that manufactures make to offer tires with improved rolling efficiency, and then confuses those (unsupported and incorrect) conclusions about the availability of such tires with the impact on consumer purchases.

There can be no question that it is consumer demand that affects the manufacturer's decisions about the tires they offer. If the consumer information labels increase demand for tires with better rolling resistance, manufacturers will meet that increased demand with tires that consumers want.

2.2 Consumer Preferences Regarding Labels Don't Necessarily Translate Into Changes in Purchasing Behavior

The fact that consumers prefer one label to another does not necessarily mean that they will change their demand and purchase choices more given a preferred label than they would given a less preferred label. Preferences regarding labels may or may not relate to changes in purchasing behavior. We could imagine a label, for example, that presents tire information in a very abrupt and non-transparent manner (e.g., perhaps a hypothetical label that simply assigns an overall DOT rating to a tire of either "acceptable" or "good"). We doubt that participants in a focus group would like such a label (e.g., "I don't like it because it's not clear how DOT came up with this rating and what it means"), but we also expect that such a label would have a large influence on consumer purchasing decisions. We expect that tire purchasers faced with such a label would buy very few tires that are "dominated",[2] meaning tires that are: a) higher priced and rated

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[2] "Domination" is a concept used in decision theory to indicate a condition where one alternative: a) performs better than another alternative on at least one attribute of concern; and b) performs the same as or better than the other alternative across all of the remaining attributes of concern. Many individuals when making decisions under uncertainty will eliminate dominated alternatives from their choice set as a first step in their decision process. A label that increases the frequency with which tire purchasers see some tires as dominating other tires would be a label that likely has a substantial influence on consumer behavior. The fewer, grosser distinctions embodied in a "bin"-type rating scheme may make it easier for a purchaser to perceive dominance situations than a more

equally or lower on this hypothetical DOT label; or b) rated as worse on the hypothetical label and costing an equal or greater amount. This hypothetical label, we think, would be disliked yet would nevertheless likely have a substantial influence on consumer purchasing behavior. Whether consumers like the format of a label format or other information presented to them does not necessarily relate directly to the degree to which their purchasing decision will be changed. The focus groups appear to have considered which label design consumers prefer, but do not appear to have developed any information on the more relevant question of how label design will affect consumers' choices.

It is clear from the PRIA that the star/bin system is effective in communicating the important information, and that consumers are familiar with and like the system. While the focus groups may have indicated a preference for more precision as implied by the 0-100 system, there is no reason to think that this will result in a material difference in purchasing decisions, particularly the assumed up to five-fold increase in sales of lower rolling tires with the 0-100 system. In contrast, there may be substantial cost implications regarding the additional testing that would be required to make the implied precision of the 0-100 system more real rather than illusionary, as discussed in Section 3.

2.3. The PRIA Fails to Fully Consider How Consumers Will Respond to the Full Set of Information Provided for Tire Fuel Efficiency, Wet Traction and Treadwear

There is no information cited by NHTSA on how consumers assign relative values across the different tire attributes (price, fuel efficiency, wet traction, treadwear), nor is there any information provided on how they will respond when presented with new label information on these attributes. If given the label information, are more consumers likely to shift their preferences toward tires with better fuel efficiency, or are more consumers perhaps likely to shift toward tires that promise better traction/safety? (Note that the PRIA cites a generally inverse relationship between tire fuel efficiency and traction.) Will the new label and replacement tire information program really result in consumers increasing their demand for fuel efficient tires, or might it do the opposite?[3] Or, another possibility. Might some consumers, in learning from the

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continuous 0-100 type rating scheme and hence, in our view, could perhaps be more influential on purchaser decisions.

[3] Research performed for RMA on consumer preferences among tire attributes has consistently found that potential replacement tire buyers rank fuel efficiency as lowest in importance among the four tire attributes that would be apparent to an individual upon seeing the proposed new label (i.e., fuel efficiency/rolling resistance, wet traction, treadwear, and price). Giving consumers new information on these four tire attributes may cause them to shift their purchasing decisions in a manner so as to get more of the tire attributes they rank highly, and less of the tire attributes they rank lower. For example, from a 2005 market research survey of recent tire buyers (Frederick Polls, "U.S. Drivers' Behaviors and Opinions Regarding Tire Characteristics in Tire Purchase Decision-Making", June 2005):

"When asked to pick from seven options for the most important factor in deciding which tire to purchase, "tire life" and "traction" are top choices. In all, 58% pick one of these two factors. Fuel efficiency scores fifth on the list with only 5% picking it as the <u>most</u> important purchase decision factor, 15% picking fuel efficiency as one of the top two most important factors, and just 31% picking it as one of the top three factors. … At 15%, the ranking for "fuel efficiency" as one of the top two choices scores well below "tire life" (57%), "traction" (47%), or "price" (46%) and even fairly far behind "weather handling" (25%). Thus, even with gas prices well established at or above the $2.00

new label that there are potentially tradeoffs between tire fuel efficiency, wet traction and treadwear that they did not previously appreciate, react with some confusion or uncertainty and decide in response to emphasize price, thus purchasing less expensive and generally higher rolling resistance tires than they otherwise would have bought?

There seem to us to be a very wide range of potential consumer responses to the label information they will receive. We do not find in the PRIA, whether from the focus groups or elsewhere, any substantive information that is helpful in predicting this response. We really don't know whether consumer demand for lower rolling resistance tires is likely to go up by 2% or by 10% or even to go down.

Under these circumstances, we suggest that NHTSA should postulate a reasonable range of possibilities and analyze in the PRIA the benefits and costs for each. The PRIA should pull together any information bearing on likely consumer response that will help in judging which among the range of possibilities might be most probable. Such information should go beyond which label design consumers like the most to address in addition how the label and the remainder of the consumer information program are likely to influence consumers' demand.

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per gallon level throughout much of the country, the percent picking fuel efficiency as the most important tire purchase criteria never exceeds the 7% level for any group."

3. REALISTIC ESTIMATES OF TESTING AND LABEL COSTS

Based on a detailed survey of potential testing, reporting and labeling costs that RMA conducted of its member companies, we believe that NHTSA has substantially underestimated the costs to manufacturers of the proposed replacement tire consumer information program.

The survey was performed during the summer of 2009. All eight RMA member companies responded. Since these eight companies represent about 80% of total U.S. sales of replacement tires for passenger vehicles, the quantities estimated in the survey of RMA members can be extrapolated to the entire U.S. replacement tire market by scaling the survey results upward by approximately 25% (i.e., 80% plus 25% of 80% = 100%).

Cost information was provided by companies on both a "best case" and a "worst case" basis. Under the "best case", manufacturers were to assume they would report only a tire's rating and not the data values underlying the rating, and would face potential noncompliance only if they claimed a rating better than determined by NHTSA in any subsequent testing. Under the "worst case", manufacturers were to assume they would need to report both the rating and the specific data values supporting a tire's rating, and would face potential noncompliance as outlined in NHTSA's tolerance band approach. Under the "best case", companies thus made optimistic assumptions about needs for testing equipment and labor and regarding the fraction of individual SKUs whose performance could be modeled or extrapolated to rather than being individually tested. Under the "worst case", companies made contrary assumptions: upper end assumptions regarding equipment and labor needs and a presumption that more SKUs would need to be tested rather than modeled and that some might even be tested more than once in order to narrow the confidence bounds and avoid violating the tolerance bands when reporting values.

3.1 Testing Costs

Additional testing costs will be incurred relating to rolling resistance, traction and treadwear.

Rolling resistance testing costs include both initial costs (capital costs of additional needed test equipment and costs to test or model/extrapolate to each existing SKU) and subsequent annual costs after the program is established (costs to test or model/extrapolate to each new SKU that is introduced during a year, and ongoing annual costs for a compliance assurance program).

Costs for traction and treadwear testing under NHTSA's proposed consumer information program will be higher than under the existing UTQG. Costs will increase under the proposed program because values must be reported for each SKU while traction and treadwear values under UTQG currently are developed generally for tire lines rather than each SKU. Cost increases will involve both additional initial costs (testing equipment and costs to test existing SKUs) as well as ongoing annual costs (continuing testing costs to report values for each SKU). Small increases in costs will result also from the need to report peak instead of skid-based values for wet traction.

The eight RMA member companies also report increased costs in order to alter their computer and information technology systems to record, track, and report to NHTSA, customers and the public the test values and/or new ratings information. These information technology costs will include mostly the initial costs to develop the new systems, along with smaller expected ongoing annual costs for continued reporting.

These testing and reporting costs for RMA members are summarized in the table below:

	Best Case	Worst Case
ROLLING RESISTANCE COSTS		
Capital costs (addl testing equipment)	$3,275,000	$7,725,000
Initial testing costs for existing products	$949,000	$4,073,508
Annual testing/new products	$233,080	$419,228
Annual testing/compliance surveillance	$736,800	$1,170,653
TRACTION COSTS		
Capital costs (addl testing equipment) to increase capacity and report indiv SKU data	$1,497,750	$8,140,473
Additional annual testing costs required to report indiv SKU data	$1,542,750	$3,605,246
Additional annual testing costs to report peak instead of skid-based values	$20,000	$1,120,000
TREADWEAR COSTS		
Capital costs (addl testing equipment) to increase capacity and report indiv SKU data	$5,940,500	$23,183,524
Additional annual testing costs required to report indiv SKU data	$7,305,500	$20,010,976
INFORMATION TECHNOLOGY COSTS		
Initial costs: modify systems to track and report this information, to NHTSA, customers and public	$2,995,000	$8,020,000
Ongoing information technology system costs	$355,000	$855,000
TOTAL TESTING AND REPORTING COSTS		
Total initial costs	**$14,657,250**	**$51,142,505**
Total annual (ongoing) costs	**$10,193,130**	**$27,181,103**
Total annualized costs (initial costs annualized over 10 years + annual costs)	**$12,280,322**	**$34,463,796**

Costs are particularly high for additional treadwear testing due to the high unit cost of performing this test (7,500 mile road test).

Costs are some two to four times higher under the "worst case" assumptions than under "best case" assumptions. Tire manufacturers see a much greater need for testing and less frequent use of modeling or extrapolation in order to develop ratings with sufficient precision to avoid violating NHTSA's tolerance bands.

Initial and ongoing costs have been combined into a single annualized cost figure assuming a 10-year useful life for the initial costs (e.g., assumed 10-year useful life for testing equipment, average 10-year market availability for all initially tested tire lines, 10-year effective life of information technology systems) and a 7% discount rate, giving an annual capital recovery factor of 0.1424.

3.2 Label Costs

RMA member companies were also surveyed regarding their projected costs to develop, print and affix the proposed new label to all in-scope passenger car replacement tires. Label costs were estimated both without the manufacture date on the label and with the manufacture date. Initial costs (costs for equipment, designing the label, setting-up for printing, and re-labeling

existing product in inventory) and ongoing costs (printing and affixing labels to all in-scope tires produced annually) were both estimated. These label cost estimates for the RMA member companies are shown below.

LABEL COSTS - WITHOUT MANUFACTURE DATE ON LABEL	
Initial costs - printing and processing equipment	$4,900,000
Initial costs - design, set-up for printing	$5,770,745
Initial costs - relabel product in inventory	$11,251,000
Subtotal - initial costs	*$21,921,745*
Annual costs - printing	$11,543,764
Total annualized costs	**$14,665,420**

Total annualized costs are calculated similarly as was done for testing and reporting costs previously. Initial or capital costs are annualized at a 7% discount rate, and are then added to annual costs to obtain total annualized costs.

Adding the date of manufacture to the label is estimated to increase costs by about 50% above the costs shown above. It is not clear to us that tire purchasers will receive any significant value from this additional information, particularly since the great majority of tire purchasers are unlikely ever to see the label. We suggest that NHTSA restrain the cost of the program and not require the manufacture date on the label.

3.3 Comparison of RMA's Testing, Reporting and Label Costs With NHTSA's Estimates

The table below shows testing, reporting and label costs as estimated in the RMA survey compared with these costs as estimated by NHTSA in the PRIA. Estimated costs for the 8 RMA member companies have been scaled up in order to estimate costs for the entire industry.

Costs of Manufacturer Testing, Reporting and Labels:
RMA Estimates Compared With NHTSA Estimates
(in millions of 2008 $)

	RMA Members		Total Industry		NHTSA
	Best Case	Worst Case	Best Case	Worst Case	
TESTING AND REPORTING					
Initial costs	$14.7	$51.1	$18.3	$63.9	$4.1
Ongoing annual costs	$10.2	$27.2	$12.7	$34.0	$0.1
LABELS					
Initial costs	$21.9		$27.4		$0.0
Ongoing annual costs	$11.5		$14.4		$9.1
Total annualized costs	$26.9	$49.1	$33.7	$61.4	$9.8

The RMA member company's estimates of manufacturer costs are much higher than NHTSA's estimates, for each category of cost:

- Initial testing and reporting costs. RMA's estimates are far higher than NHTSA's primarily because the manufacturers estimate a significant need for additional treadwear and wet traction testing relative to that which now occurs for UTQG. Manufacturers in the first year of the program will need to purchase equipment and expand their capacity for performing these tests. NHTSA estimates no incremental costs for new treadwear or traction testing. Further first year costs will accrue as manufacturers purchase additional equipment for performing rolling resistance tests and perform these tests for existing SKUs. NHTSA estimates in the PRIA a figure of $3.7 million ($180 per SKU multiplied by approximately 20,000 existing SKUs) for testing rolling resistance for all existing tire models, a figure roughly equivalent to RMA's "best case" estimate of $3.3 million in costs for rolling resistance test equipment plus $0.9 million in costs to test existing SKUs for rolling resistance.

- Ongoing testing and reporting costs. NHTSA estimates virtually no costs for ongoing testing and reporting ($0.1 million for rolling resistance testing only -- no additional testing for wet traction or treadwear -- for an estimated 125 new tire SKUs each year). The RMA member companies project to the contrary nearly 2,700 new SKUs each year that will need testing for rolling resistance, wet traction and treadwear, a number that scales to more than 3,200 new SKUs per year for the entire industry. The treadwear and wet traction testing will be particularly costly. In addition, there will be ongoing manufacturer costs for maintaining compliance assurance, data management and reporting systems.

- Initial label costs. NHTSA has not estimated any costs for setting up the printing and labeling system and for labeling the existing inventory of tires. RMA estimates a cost of about $1.3 million per company to design the label and purchase and set up equipment to print the labels and affix them to tires produced in the future. Putting labels on the inventory of existing tires will necessarily involve some different and more costly procedure, since tires in inventory have already come off the manufacturing lines and are located at various points in the distribution chain.

- Ongoing label costs. NHTSA estimates a cost of $0.05 per tire to print and glue the new color label on each tire produced in the future. The RMA member companies estimate a somewhat higher labeling cost, which averages about $0.08 per tire.

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3.4 Additional Cost Information from Survey of Tire Manufacturers

RMA's survey of their 8 tire manufacturer members provides additional information that may be compared with cost estimates provided in the PRIA. This additional information is shown below.

	RMA MEMBERS	TOTAL INDUSTRY	NHTSA
Per tire cost to improve RR of tire without traction or treadwear trade off:			
minimum	$2	$2	$2
maximum	$6	$6	$4
median or average	$3	$3	$3
Per tire cost savings to remove UTQG rating from sidewall	$0.008 to $0.01	$0.008 to $0.01	$0.02
Total current # SKUs affected by the rule	about 15,000	about 19,000	20,708
Total # new SKUs added per year (estimate)	2,685	3,222	125

The survey figures generally confirm NHTSA's estimates regarding the cost per tire to improve rolling resistance without sacrificing traction or treadwear, and regarding the number of current SKUs affected by the rule. The survey information suggests somewhat lesser cost savings per tire than NHTSA estimates for removing the requirement for UTQG rating on tire sidewalls. The survey estimates far more new SKUs added per year than does NHTSA.

4. FULL ANALYSIS OF BENEFITS AND COSTS IS NEEDED

The PRIA's cost benefit analysis finds relatively small positive net benefits for the proposed rule. These positive net benefits might easily be outweighed by potential safety and durability disbenefits that were acknowledged in the FRN and PRIA, but were not estimated and monetized, even though these have been estimated for other NHTSA rules. The PRIA should estimate and monetize potential safety and durability disbenefits, or at least perform scenario or sensitivity analysis to assess their potential impact. The cost benefit analysis should also include all of the costs that have been estimated, including the first year costs.

4.1. The PRIA Finds Relatively Small Positive Net Benefits

The PRIA's cost benefit analysis finds relatively small positive net benefits for the proposed rule. The following information on costs and benefits is abstracted from PRIA Tables VI-1 and VI-2.

Annual Costs and Benefits After First Year, From the PRIA (Millions of 2008 dollars)

Costs:			
Manufacturer's label on tire ($0.05 x 181 million tires)		$9.05	
Manufacturer testing and reporting		$0.12	
Government testing and reporting		$1.28	
Subtotal		$10.5	
Costs to improve rolling resistance @$3/tire			
If 1% of target tires (1.4 million)		$4.2	
If 2% of target tires (2.8 million)		$8.4	
If 10% of target tires (4.2 million)		$42.0	
Fuel savings benefits (assuming 5 – 10% improvement in RR):			
If 1% of target tires (1.4 million)		$11 - $22	
If 2% of target tires (2.8 million)		$22 - $44	
If 10% of target tires (4.2 million)		$110 - $220	
Net Benefits; NHTSA's figures:			
	Costs	Benefits	Net Bens.
If 1% of target tires and 5% improvement in RR	$14.7	$11	-$3.7
If 2% of target tires and 10% improvement in RR	$18.9	$44	$25

Net benefits, if 1 – 2% of purchasers of replacement tires switch to lower rolling resistance tires and these tires have 5 – 10% improvement in rolling resistance, can range from negative $3.7 million per year to positive $25 million per year using NHTSA's figures. These net benefits are not large relative to some of the potential costs of the program (e.g., $9.05 million per year as NHTSA's estimated cost to put the new labels on tires, or RMA's estimate of $12 - $34 million per year in annualized testing and reporting costs).

In fact, comparing NHTSA's estimated fuel economy benefits against RMA's estimates of program costs, net benefits appear very likely to be negative. The following table shows this comparison of NHTSA's estimated fuel economy benefits (assuming again that 1 – 2% of purchasers of replacement tires switch to lower rolling resistance tires and these tires have 5 – 10% improvement in rolling resistance) against RMA's cost estimates. Costs are included both for improving the rolling resistance of tires ("tire costs") and for testing, reporting and labels ("manufacturer program costs").

Annualized Costs and Benefits: NHTSA Benefits, RMA Costs (Millions of 2008 dollars/yr)

	RMA Cost Estimates		NHTSA Benefit Estimates	Net Benefits
	Tire Costs	Mfr. Program Costs		
If 1% of target tires and 5% improvement in RR	$4.2	$33.7 to $61.4	$11	-$24.9 to -$54.6
If 2% of target tires and 10% improvement in RR	$8.4	$33.7 to $61.4	$44	+$1.9 to -$25.8

The costs to manufacturers of implementing the proposed consumer information program and improving tire rolling resistance appear significant and perhaps larger than the estimated benefits of the program, whether using NHTSA's or RMA's cost estimates. In order to increase the likelihood that net benefits could be positive, testing and reporting requirements (and hence costs) should be kept to a necessary minimum. Information requirements for labels should be limited to information that is justified.

4.2. Potential Disbenefits That Were Not Estimated May Be Significant Relative to the Small Positive Net Benefits That the PRIA Estimated

4.2.1. Evidence From the PRIA for Potential Safety and Durability Tradeoffs

Table VII-1 in the PRIA (page 95) provides a summary of the total costs and benefits estimated for the proposed rule and alternatives. The estimated fuel economy benefits of the proposal range up to $220 million per year assuming 10% of consumers choose to purchase reduced rolling resistance tires as a result of the new label and information program, or up to only $44 million per year if 2% of consumers choose reduced rolling resistance tires (assuming 3% discount rate). As we discussed previously, we do not believe NHTSA has a good basis for assuming the 10% response figure, nor for assuming that the 0-100 rating system will be up to five times as effective in encouraging purchase of lower rolling resistance tires as the stars/bin system. If one were to assume that the proposed 0-100 rating system is only as effective as NHTSA assumes the stars/bin system to be (i.e., an additional 1 - 2% of consumers will purchase lower rolling resistance tires), then the fuel economy benefits for the proposed rule at $22 - $44 million per year would not be substantially greater than the program costs as estimated by NHTSA at $19 - $27 million per year, with resulting steady state annual net benefits of only $3 - $18 million (at a discount rate of 3%).

The footnote to Table VII-1 in the PRIA notes that these benefits estimates reflect fuel savings only, and "do not account for benefits or disbenefits regarding safety and durability." The PRIA elsewhere suggests that improving tire rolling resistance is more likely to lead to disbenefits rather than benefits involving safety and perhaps also durability:

- NHTSA's Phase II testing found a consistent, statistically significant relationship between higher tire rolling resistance and higher wet traction slide numbers and ratios (see Table III-12). NHTSA concludes that "tires with lower rolling resistance will have poorer wet traction performance" (page 47).

- Testing for a possible relationship between a tire's dry traction performance and its rolling resistance found no statistically significant relationship (Table III-10, page 44). The PRIA concludes that "there is no indication that a tire with improved rolling resistance will necessarily have lower dry traction performance in this test" (page 43). However, even though none of the eight correlations between improved rolling resistance and lower dry traction performance shown in Table III-10 are statistically significant, seven of the eight correlations shown are positive. This perhaps suggests that there may be a weak relationship between better rolling resistance and reduced dry traction that could be explored with more testing and more data.

- In testing for a possible relationship between tire rolling resistance and treadwear, NHTSA concludes from the Phase II testing that "there is no evidence from this data that a tire with reduced rolling resistance will necessarily have reduced tread life" (page 52). On the other hand, in reviewing tire manufacturing options, the PRIA states "When rolling resistance and wet traction have been optimized it is then likely that the tread compound is not as durable, and the treadlife may be somewhat lessened. These trends were verified with measurements taken from the tires tested by VRTC" (page 13). In examining the same issue, a report prepared for the State of California concludes: "The California Energy Commission (CEC) recently issued a report advocating reduced rolling resistance tires. Unfortunately, reducing rolling resistance comes at the expense of other tire attributes including tread wear. … promoting such tires would negatively affect average tire life mileage."[4]

In addition to the potential tradeoffs between tire rolling resistance and traction and perhaps treadlife that manufacturers may face, consumers may act in a manner to further emphasize the potential tradeoffs. Both the preamble to the proposed rule and the PRIA speculate that if consumers are motivated by saving money and if the labeling program convinces them that improved tire rolling resistance will reduce subsequent fuel expenditures, some consumers may simply try to minimize the total cost of buying tires and fuel, and in so doing will purchase tires with reduced wet traction:

> "….NHTSA is concerned about the potential negative safety consequences that may occur if consumers, motivated by potential fuel savings, begin to purchase tires with better rolling resistance ratings but are unwilling to spend additional money to also maintain wet traction levels….This may be especially prevalent in the lower-cost segments of the market."[5]

[4] Shmuel L. Weissman, et. al., *Extending the Lifespan of Tires: Final Report.* July, 2003.
[5] 2.1 Potential Safety Consequences, Federal Register. Vol.74, No.118, June 22,2009 page 29560,

The PRIA does not analyze the potentially serious consequences of such possible tradeoffs, even though both the FRN and PRIA acknowledge that such an analysis is feasible and has been performed for other rules.

4.2.2. Evidence From the RIA for the Tire Pressure Monitoring Rule Regarding Safety Tradeoffs

We believe that the possible traction disbenefits of the proposed replacement tire consumer information program, and to a lesser degree the possible treadwear disbenefits, could be sufficiently large to outweigh the rather modest projected fuel economy benefits for the proposed Consumer Information Program. We reach this conclusion by considering NHTSA's findings in the Final Regulatory Impact Analysis for the Tire Pressure Monitoring System (TPMS) rule (FMVSS No. 138), an analysis where NHTSA *did* estimate and monetize the likely safety and durability impacts of changing tire performance – in contrast to the present PRIA, where NHTSA does not quantitatively analyze the possible interactions betweens tire rolling resistance and safety and durability.[6]

On page 17 of the PRIA, NHTSA calculates the difference in wet stopping distance at 40 mph for a given tire size across the range of rolling resistance values that exist within the Agency's data. NHTSA finds a 30-percent difference in wet slide numbers, which translates into an increase of 27 feet (13 percent) in calculated wet stopping distance for a non-ABS equipped vehicle. This "worse case" (as the PRIA terms it) estimate of stopping distance impact that may be at stake in tire rolling resistance issues is much greater than most of the changes in stopping distance that were analyzed in great detail in NHTSA's RIA for the TPMS regulation.[7] For example, in Table III-5 (page III-5) of the TPMS RIA, the increase in wet stopping distance at 45 mph with a reduction in tire pressure from 35 psi to 25 psi was only 2 to 4 feet (roughly 1 – 2 % increase, in contrast to the "worse case" figure of 27 feet/13% increase potentially at stake in the current regulation). That RIA analyzed, among other things, the impact of changes in stopping distance on fatalities, nonfatal injuries and property damage.

To provide further perspective on the importance of small changes in stopping distance, the RIA for the TPMS regulation, at an intermediate point in calculating the monetized benefits of the rule, estimates that proper tire inflation would have reduced the average stopping distance of those passenger vehicles involved in accidents that caused injuries from 86.5 feet to 85.2 feet. DOT calculated the effect of this reduced stopping distance in reducing vehicle impact speed (delta-v) in crashes and then in reducing the probability of injury in passenger vehicle crashes. DOT found that the projected 1.3% reduction in stopping distance with proper tire inflation would have prevented 1.4% of all passenger vehicle crashes involving injuries, and would have somewhat reduced the severity of the remaining 98.6% of injury crashes.

[6] NHTSA notes in the PRIA that the Agency could perhaps analyze the potential safety impacts of reduced tire rolling resistance using the analytical approach previously applied for the TPMS regulation. See page 79 of the PRIA and footnote 65.

[7] Note that benefits from reduced stopping distance accounted for the majority of benefits estimated to result from the TPMS regulation.

In contrast, based on the mathematical relationships shown as angled lines in PRIA Figures III-16 and III-17 (wet traction vs. rolling resistance for asphalt and concrete surfaces), it appears that the 10% reduction in rolling resistance that is presumed in the PRIA for an affected replacement tire would on average reduce the tire's slide number by 1 – 3 points, representing an increase in stopping distance of some 2 – 5%. The average change in stopping distance that might result from the scenario analyzed in the replacement tire consumer information program PRIA is thus roughly twice as large (2 – 5% vs. 1.5%) as the change in stopping distance that is exhaustively analyzed in the TPMS RIA.

To provide a monetized perspective on the importance of including an analysis of any potential impact on safety in the current PRIA, consider the fact that DOT's current guidance requires the Department's RIAs to assume the value of a statistical life (VSL) as $5.8 million, and to provide supplementary benefit calculations based on VSLs of $3.2 and $8.4 million.[8] With the PRIA's estimate of net benefits for the consumer information program on the order of only $-4 to $25 million or so per year (assuming 1 - 2% of applicable tires are sold with 5 - 10% improved rolling resistance; see the preceding table), it should be evident that relatively few fatalities associated with reduced traction could be enough to outweigh the positive net benefits that the PRIA claims for this rule. This is even before consideration of the cost of non-fatal injuries and property damage.

4.3 Consideration of Additional Potential Costs and Benefits

4.3.1 Increased Resource Costs Due To Tires With Less Tread Life

The PRIA should also consider the potential impact of consumers selecting tires with less tread life. Selection of a tire that has less tread life will move forward in time and thus increase the effective expenditure on any future replacement tires. And, for some consumers, purchasing tires with less tread life may mean buying more sets of replacement tires over their vehicle's lifetime. For example, if a consumer buys replacement tires with a lifetime of 30,000 miles rather than 45,000 miles and keeps the car long enough, after 90,000 miles the consumer will have needed to buy three sets of tires instead of two sets. The three sets of lower tread life tires may cost more than the two sets of higher tread life tires, and there will be additional societal costs associated with the manufacture of the additional tires (energy, pollution and resources) and their disposal.

4.3.2 Impacts of Changes in Greenhouse Gas Emissions Should Be Monetized

To the extent that savings in fuel consumption are estimated, NHTSA should estimate the volume and value of the reduced greenhouse gas emissions. The increased amount of tire durability/treadwear testing (7,500 mile road tests) that manufacturers would need to perform

[8] Memorandum from D.J. Gribbin, General Counsel, U.S. Department of Transportation, Treatment of the Economic Value of a Statistical Life in Departmental Analyses, February 5, 2008

under the tolerance band approach will lead to countervailing increases in greenhouse gas emissions, and this impact also should be assessed.

4.4 The Cost Benefit Comparison Should Include All Costs, Including First Year Costs

The PRIA's comparison of costs and benefits is performed on an annual steady state basis. Consequently, the first year costs, which were estimated in the PRIA, are ignored in this comparison. As required by Executive Order 12866, all costs and benefits should be estimated, quantified to the extent possible, and included in a summary comparison of costs and benefits. The first year costs, as estimated in PRIA Table VI-1, are $4 million, but these costs are not included in the summary presentation of combined total costs and benefits in Table VII-1. Further, as discussed in Section 3, RMA estimates much higher first year costs than does the PRIA, and so it is even more important to include them.

The first year costs can readily be reflected even in an annual steady state cost benefit framework by amortizing or annualizing these costs. For example, the annual annuity value of first year costs of $4 million at the social discount rates of 3% and 7% would be $120,000 and $280,000. The annualized value of the first year costs would be higher if the first year activities are assumed to have declining value over time; for example, if first year costs include purchase of equipment that will wear out over time, or testing of tire models that will eventually after some time no longer be sold. Instead of assuming an infinite useful life for the first year activities and costs, we think it better to assume some average useful life for the first year investments. In our calculations in this paper applied to both NHTSA's estimates of first costs and RMA's estimates, we assume an average useful life of ten years. We annualize first year costs assuming a useful life of 10 years and a social discount rate of 7% per year, resulting in a capital recovery factor of 0.1424. First year costs are treated, in effect, as capital expenditures with a limited useful life. We annualize them and incorporate them in the steady state framework in this manner.

Alternatively, rather than focusing on a steady state calculation, NHTSA could estimate the overall net present value as of the program's inception of the costs and benefits of the entire program over time. This could more accurately represent all the costs and benefits of the program, including initial costs, if there was an expected ramp up period or other factors that would make costs after the first year something other than level.

4.5 NHTSA Should Consider More Effective Ways to Get Tire Rating Information to Consumers Than a Label That Most Consumers Probably Will Not See

Taking a broad view, the entire consumer information program should be designed to get information to replacement tire purchasers at a time and in a manner that is helpful in their making decisions. It is not at all clear that a new label that is required to be affixed to tires, but which few potential purchasers are ever likely to see in practice, is a cost-effective way of meeting this information goal. A tire purchaser rarely sees the particular tires he is purchasing

until after the purchase is completed – perhaps when the tires are being mounted or after they are already on the car. Seeing or being given the label at this point, after the replacement tire purchase has been made, is not helpful in informing the purchase decision. The new tire rating information could be quite helpful in the purchase decision, but a requirement that a label be affixed to the tire and remain with the tire until it is sold is not helpful in getting the label information into the consumer's hands at the right point in the purchasing process. The poster required to be displayed by the tire dealer is of limited assistance in this process. The poster cannot feasibly include comparative rating information on all the replacement tire models the purchaser may wish to consider. The poster can help only if the purchaser sees it, realizes that potentially helpful tire ratings exist, asks the dealer for such ratings on all the tire models that could be appropriate for the purchaser's vehicle, and then receives and considers the ratings for appropriate tire models before making the final purchase decision.

The labels themselves will cost roughly $9 million per year by NHTSA's estimate or $14 million per year by RMA's estimate (or more, if tire manufacture date is required on the label). These costs represent a significant fraction of the projected costs of the program, and they are also not immaterial relative to the estimated fuel savings benefits of the program. We suggest that some of these substantial costs of the new labeling program might better be spent on other more effective means of communicating tire rating information to potential purchasers. Such possibilities might include training and materials aimed at enhancing the information exchange between tire dealer personnel and customers, web-based applications that provide comparative rating information on the particular replacement tires available to a customer at a particular site and time and suited for the customer's vehicle, and the like. To increase the effectiveness of the rule, NHTSA should think broadly and creatively about by making tire rating information available to consumers at the time when it matters to them by means in addition to or other than labels.

4.6 There is More at Stake in the Consumer Education Program on Tire Maintenance Than There is in the Replacement Tire Information Program, and NHTSA Should Prioritize Accordingly

Continuing with the same theme to the effect that NHTSA should think creatively about designing a broadly effective consumer information program in response to the EISA mandates, we note that there appears to be much more to gain in educating consumers about appropriate tire maintenance than in providing them with information regarding purchase of replacement tires.

In the TPMS final RIA, NHTSA cites estimates to the effect that fuel efficiency is reduced by 1% for roughly every 3 psi of tire underinflation (pages V-53 and V-54). The PRIA estimates that a very similar 1.1% change in vehicle mpg would result from a 10% reduction in tire rolling resistance, the maximum reduction that might be expected for tires engineered for improved rolling resistance with no tradeoff in terms of traction or treadwear. If such a "no tradeoff" tire were to achieve only a 5% reduction in rolling resistance, the lower end of NHTSA's assumed range, then a vehicle equipped with these lower rolling resistance tires would gain only a 0.55% improvement in fuel efficiency. In effect, the magnitude of the fuel efficiency gain in equipping a vehicle with lower rolling resistance replacement tires is roughly equivalent to only 50% to 100% of the gain that would result from avoiding 3 psi underinflation in that vehicle's tires.

There are further dimensions in this comparison of what is at stake in rolling resistance for replacement tires vs. tire maintenance issues more generally:

- The average degree to which tires are underinflated appears to be greater than 3 psi, even after considering the improvements in inflation maintenance expected with TPMS. The previously cited report to the State of California analyzes NHTSA data collected during the year 2001 and prior to TPMS and concludes that the national vehicle fleet as of that year averaged 10 or 11 psi below placard.[9] The advent of TPMS has undoubtedly reduced the degree of underinflation since these data were collected, but TPMS: a) Affects only those vehicles and tires equipped with this technology; and b) Provides notification of underinflation for vehicles equipped with the system only when at least one tire is underinflated by at least 25%, thus leaving all lesser underinflation situations unaddressed.

- A consumer education program addressing tire maintenance generally and inflation pressure in particular will potentially affect <u>all</u> tires and vehicles, including OEM tires, light truck tires, snow tires, etc. In contrast, NHTSA estimates in the PRIA that better rolling resistance as a result of the replacement tire consumer information program will be obtained for only 1 – 10% of a more limited set of tires/vehicles, excluding OEM tires, light truck tires, etc.

- Better rolling resistance results in improved fuel efficiency but perhaps disbenefits in terms of wet traction and maybe treadwear. Better maintenance of inflation pressure results in greater improvements in fuel efficiency as well as clear benefits in terms of wet traction plus other safety aspects, tire durability,[10] vehicle handling, and more.

- Proper tire maintenance includes much more than maintenance of proper tire pressure, including alignment, rotation, checking treadwear, etc.. Considering these further dimensions of tire maintenance increases the potential benefits of a tire maintenance program well beyond those that can be realized with respect to tire inflation pressure alone.

In short, there appear to us to be far larger potential social benefits (fuel economy, safety, tire durability, etc.) at stake in educating consumers about proper tire maintenance than are at stake in the proposed replacement tire consumer information program. We realize that EISA is much more explicit about what NHTSA must do in terms of the replacement tire program than the directions regarding the education program on tire maintenance. Nevertheless, NHTSA should pay some attention to the relative net benefits at issue for the two programs in setting priorities

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[9] Weissman, et. al., July, 2003. op cit

[10] Regarding tire durability, the Weissman, et. al. report for California (ibid.) concludes (page VI):

" … 50% of all light duty tires entering the waste stream do so because of abnormal wear, which is due to poor tire maintenance. An additional 10% enters the waste stream due to oxidation and separation, two processes that are accelerated when tires overheat, which is also a consequence of poor tire maintenance (e.g., low air pressure). Thus, improving the maintenance of tires can extend the life of about 60% of light-duty tires. … Tires lose about 1.78% of their tread life for each psi below placard pressure."

between the two programs in terms of regulatory effort, regulatory requirements, and resulting compliance costs.

5. ADDITIONAL INFORMATION PROVIDED TO CONSUMERS

5.1 Consumers Should be Able to Apply a Discount Rate Appropriate for Them

Discounting social costs and benefits (as guided by OMB) may be rather different from the calculation that consumers make for their individual purchases. The PRIA applies a 3 percent and 7 percent discount rate to evaluate the costs over time associated with the proposed rule. That is appropriate for evaluating the overall costs and benefits of the proposed rule from a societal perspective.

However, when evaluating how consumers will make their purchase decisions, and when providing information to consumers about potential costs and savings, it is essential to do so from their perspective. Consumers do not apply the social discount rate when making their purchase decisions, but instead consider their individual cost of money. In many cases, this is the cost of credit card debt, which according to Federal Reserve statistics was about 11 percent for May, 2009[11]. From the consumer's perspective, a cost of money of, say, 11 percent decreases the present value of fuel efficiency savings over time relative to estimates based on the social discount rates of 3 percent and 7 percent.

Consequently, NHTSA should be careful to apply the appropriate discount rates when estimating the present value of fuel efficiency savings, depending on the use of and audience for the resulting estimates. In particular, if NHTSA develops a calculator for consumers to use in evaluating their potential savings from lower rolling resistance tires, the calculator should allow individual consumers to enter the cost of money that is appropriate for them.

5.2 If a Combined Rating Is Provided, It Should Only Augment the Other Ratings

As recognized in the PRIA and the FRN, consumers likely have differing preferences regarding the tradeoffs among fuel efficiency, traction and treadwear when purchasing tires. Therefore, each consumer should have the benefit of the information for each of these factors to make an informed choice that is appropriate for them. If a single rating is provided, it should not replace the individual ratings.

To the extent NHTSA provides a single rating to augment the individual ratings, the most appropriate basis would be a rating that is developed taking into account the monetization of all of the costs and benefits from an overall societal standpoint. The comprehensive analysis to develop such a combined rating would include the monetized benefits or disbenefits associated with:

[11] www.federalreserve.gov/releases/g19/current Release date August 7, 2009

- Fuel efficiency;

- Wet traction, including changes in stopping distance and the associated changes in fatalities, injuries and property damage;

- Treadwear, including changes in tire life and the associated changes in tire replacement costs and other costs due to changes in the number of tires produced and disposed; and,

- Greenhouse gas emissions.

If a combined rating is provided a disclaimer would need to clearly state that the overall societal rating may differ from what an individual purchaser may decide is best for him or herself.