

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF TENNESSEE
NASHVILLE DIVISION

TERRY WILLIS, et al., on
behalf of themselves and all
others similarly situated,

 Plaintiffs.

 vs.

AMERICAN HONDA FINANCE
CORPORATION,

 Defendant.

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) No. 3-02-0490
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Class Action



EXPERT REPORT OF

IAN AYRES

JUNE 30, 2004

TABLE OF CONTENTS

INTRODUCTION AND SUMMARY OF FINDINGS 1

I. AN INTRODUCTION TO DISPARATE IMPACT TESTING 4

II. TESTS FOR EVIDENCE OF UNJUSTIFIED DISPARATE IMPACTS ARE AMENABLE TO AGGREGATE STATISTICAL ANALYSIS 10

 A. *What Constitutes a Legitimate Business Need* 12

 B. *Creditworthiness Justifications* 21

 C. *Revenue-Based Justifications* 27

III. ALTERNATIVE MARKUP POLICIES WOULD REDUCE THE OBSERVED RACIAL MARKUP DISPARITY 31

 A. *Fixed Fees* 31

 B. *Markup Caps* 33

 C. *Commission Caps* 35

 D. *Affirmative Lending* 35

 E. *Point of Purchase Disclosure* 36

 F. *Pre-Purchase Advertisements* 38

IV. CAUSAL THEORIES OF THE RACIALLY DISPARATE FINANCE CHARGE MARKUPS 41

 A. *Racially Influenced Decisionmaking* 42

 1. *Evidence of Race-Contingent Vehicle Pricing* 44

 2. *Evidence of Race-Contingent Decisionmaking in Other Contexts* 48

 B. *Dealership Inferences About Borrowers' Willingness to Pay Supra-Competitive Prices* 50

CONCLUSION 52

QUALIFICATIONS 54

EXHIBIT 1: CURRICULUM VITAE

EXHIBIT 2: MATTERS ON WHICH IAN AYRES HAS TESTIFIED OR WRITTEN DISCLOSED REPORT

EXHIBIT 3: DOCUMENTS CONSIDERED

EXHIBIT 4: TABLE 1

EXHIBIT 5: TABLE 2

INTRODUCTION AND SUMMARY OF FINDINGS

I am an economist and a lawyer who teaches at Yale Law School.¹ Counsel for plaintiffs have asked for my opinion regarding three issues that are relevant to whether a class should be certified in this case and, ultimately, to a determination of disparate impact liability:

- (1) In this case, can the legal elements for disparate impact liability be analyzed on the basis of available information with aggregated statistical analysis?
- (2) Are there alternative credit pricing policies that Honda Finance could implement that would either eliminate or produce a smaller disparate impact?
- (3) What might cause any racial disparities that are found?

The first section of this report discusses, in general, the appropriate methodology for statistical analysis in disparate impact cases. The remaining four sections respond to each of these questions.²

I have nine central opinions:

- (1) The elements of disparate impact liability – including the business justification defense – are amenable to aggregate statistical analyses based on existing and available information contained in Honda Finance’s electronic databases which can control for a host of individual borrower factors. The results of these aggregate analyses can resolve questions of fact that are common to the members of the class.
- (2) Because there is strong prima facie evidence that Honda Finance’s credit pricing system produces a disparate racial impact, Honda Finance can only avoid liability here if its markup policies are found to be consistent with “business necessity.” In analyzing whether disparate impact caused by a defendant’s policy is justified, it is necessary for statistical regression analysis to control for all “legitimate business

¹ A full statement of my qualifications can be found at the end of this report.

² If counsel requests, I will undertake additional work to respond to defendant’s evidence, including any expert reports offered.

needs” of the defendant. See *Official Staff Commentary*, to ECOA Regulation B, Section 202.6. However, in a disparate impact case, it is equally important that the statistical analysis *not* control for factors that do not represent “legitimate business needs.” Simply put, disparate impact analysis tests whether a decisionmaker’s reliance on unjustified factors has produced a disparate racial impact. This test cannot be done unless the unjustified factors are purposefully excluded from the analysis.

- (3) Evidence of borrowers’ individual creditworthiness can be controlled for in an aggregate analysis. Honda Finance relies on a credit scoring system which by law must be “empirically derived, demonstrably and statistically sound.” Thus, all credible individualized factors upon which Honda Finance relies for determinations of a given borrower’s creditworthiness already exist in Honda Finance’s centralized data.
- (4) The racial disparities found in the amount of markups are not driven by differences in either the dealers’ or Honda Finance’s cost of providing lending services.
- (5) In determining whether there is an unjustified disparate impact (after controlling for “legitimate business needs”), it is inappropriate to consider individualized factors – such as borrower negotiation skills or borrower preferences – because these factors are not related to either the dealers’ or Honda Finance’s cost of doing business. They are not related to the individual borrowers’ creditworthiness or their ability to repay the loan.
- (6) The racial disparities in markups are not the by-product of market competition

between different lenders, but are rather the by-product of an absence of such competition.

- (7) In other cases brought under the ECOA, defendant financing companies have argued that common questions of fact do not predominate because it is necessary for the Court to conduct an individualized (disaggregated) inquiry into each borrower's negotiation skills, preferences and a host of other factors that might affect the ability of dealerships to extract supra-competitive revenue from individual borrowers. It is my opinion that these factors should not be controlled for. These factors should be excluded from the aggregate analysis, not because they have no effect on the markup the buyers paid,³ but because any effects that they might have do not qualify as legitimate business needs.
- (8) A large variety of alternative markup policies would likely reduce the disparate racial impacts uncovered in the Honda Finance data. Most basically, reducing the dealerships' discretion in setting markups is likely to reduce the racial disparity. Compensating dealers with a flat dollar amount for arranging the loan would eliminate the racial disparity. Reductions in the racial disparity could also be accomplished with various forms of markup caps, commission caps, consumer disclosure or affirmative lending programs.
- (9) Evidence from social science studies, from the record in this case, and from other cases brought under ECOA, suggest that the racial disparities in finance charge markups found were caused at least in part by (i) Honda Finance's credit pricing

³ The defendant, however, has introduced no credible evidence of any such effect.

system which gives dealerships discretion to engage in opportunistic race-contingent decisionmaking; and (ii) Honda Finance's credit pricing system which gives dealerships discretion to make non-race inferences about borrowers' willingness to pay supra-competitive⁴ markups (which adversely impact African-Americans) .

I. AN INTRODUCTION TO DISPARATE IMPACT TESTING

In order to determine the appropriate econometric model to test for discrimination in the context of a legal claim brought pursuant to a civil rights statute, an econometrician must first determine whether the underlying legal claim is based on a "disparate impact"⁵ analysis or a "disparate treatment" analysis. This is necessary due to the absence of an intent element in a disparate impact analysis, as noted in *Watson v. Fort Worth Bank & Trust*, 487 U.S. 977, 987 (1988) ("The factual issues and the character of the evidence are inevitably somewhat different when the plaintiff is exempted from the need to prove intentional discrimination.").

Because disparate treatment and disparate impact theories of discrimination have distinct elements, it is appropriate when testing for disparate treatment and disparate impact to use distinct statistical methods. When econometricians attempt to test for disparate racial *treatment*, the goal in a regression analysis is to control for all of the non-race variables that might have explained a particular set of decisions. The regression asks in essence whether -- after controlling for all potential non-race variables -- the race, say, of a loan applicant determined the finance charge markup

⁴ "Supra-competitive markup" means a markup that exceeds a dealership's expected costs of arranging and/or processing Honda Finance loans. The concept of "cost" includes earning a reasonable economic profit as a return on capital invested. See *infra* note 15.

⁵ This is also commonly referred to as an "effects test."

she would be asked to pay.

In disparate *treatment* cases – as opposed to disparate *impact* cases – what statisticians call “omitted variable bias” is often a primary concern. If a disparate treatment regression fails to include (or “omits”) a non-race variable upon which the decisionmaker actually based her decision, then the regression can erroneously indicate that the decisionmaker treated minorities differently than whites. For example, if (1) the decisionmaker has a practice of charging higher finance charge markups to applicants without a high school diploma and if (2) the pool of applicants without diplomas is disproportionately comprised of minorities, then omitting from the regression whether applicants graduated from high school might bias the test of disparate treatment. The regression might superficially indicate that the decisionmaker demands higher finance markups from African-Americans when in fact the decisionmaker demands higher markups from applicants without diplomas.

But tests of disparate *impact* require a different statistical method. Under a disparate impact theory, it is possible for decisionmaking policies that are facially race neutral to give rise to liability if they disproportionately burden the plaintiff class. For example, a practice of charging higher finance charge markups to applicants without a high school diploma still makes out a legal claim if this non-race criterion results in a disparate racial impact that has no business justification.

Under a disparate impact theory, it is necessary to intentionally exclude (that is, “omit”) non-race variables from a regression to test whether those variables produced a disparate racial impact. In disparate *treatment* regressions, the idea is to test whether, after controlling for all possible non-race factors, there is still a racial disparity in decisionmaking that can be attributed to the decisionmaker’s intentional discrimination. But in a disparate *impact* case, the idea is to test whether

non-race factors might have caused a racial disparity in the first place. It is inappropriate to control for these non-race factors in the regression under a disparate impact theory, because the statistician wants to see whether these non-race factors produce racially disparate outcomes.

For example, in a stylized version of *Griggs v. Duke Power Co.*, 401 US 424, 431-2 (1971), the Supreme Court's first disparate impact case, one could imagine running a regression to test whether an employer was less likely to hire African-American applicants than white applicants. It would be possible to control in this regression for whether the applicant had received a high school diploma. Under the facts of *Griggs*, such a control would likely have reduced the racial disparity in the hiring rates. But including in the regression a variable controlling for applicants' education would be inappropriate, because the Court found that the employer in *Griggs* had no legitimate reason to require a high school diploma for the manual labor positions being filled. The central point of *Griggs* was to determine whether the employer's diploma requirement had a disparate racial impact. The possibility that including a diploma variable would reduce the estimated race effect in the regression would in no way be inconsistent with a theory that the employer's diploma requirement disparately excluded African-Americans from employment. Excluding non-race factors is inappropriate in disparate treatment tests, but such exclusion is *necessary* in disparate impact tests.⁶

⁶ My economic opinion is consonant with the parsing of *Griggs* in *Gulino v. Board of Education*, 236 F. Supp. 2d 314, 341 (S.D.N.Y. 2002):

Plaintiffs in [*Griggs*] were not required to rule out other variables, such as socio-economic status, or previous education experience. Indeed, the reason they were not required to so prove is precisely the reason disparate impact theory was developed—the practices challenged under the theory affect minorities not because of their overtly discriminatory character but rather because the criteria they require correlate closely with race. . . . If the plaintiffs had been required to show that it was their race that kept them from being hired—not their inability to finish high school—they would have been without legal recourse.

Therefore, when testing for unjustified disparate impacts, econometricians are often concerned with what is called “included variable bias” – the converse of the “omitted variable bias” relevant to disparate treatment analysis.⁷ Including controls for non-race factors that do not represent legitimate business justifications can bias the estimate of whether a decisionmaker’s policies produced an unjustified disparate impact. A recent statistical guide for judges and lawyers emphasizes how mistakenly including irrelevant variables can bias a regression’s estimate of the racial effect:

Lastly, and perhaps most important under the heading of legitimacy, is the problem of tainted independent variables. Suppose a regression analysis includes a variable for education that, in a race case, is a key determinant of salary differences between black and white employees in a clearly different job group. Regression analysis indicates a high t-statistic on education and an insignificant t-statistic on the race coefficient. Given that in almost all groups, white employees have received more formal education than black employees, it would appear that education goes a long way towards explaining salary differences between black and white employees. The burden is on the employer, however, to demonstrate separate from the regression, that education was required and affected performance, and hence directly determined salary. To the extent that education is not related to job performance, it is an inappropriate variable to use in a regression. Excluding key variables and including irrelevant variables have the same impact.⁸

The purposeful exclusion of control variables from statistical analysis will accordingly be an essential part of any disparate impact inquiry. Indeed, as the foregoing authority suggests, a variable should be presumptively excluded from the statistical analysis unless the defendant can “demonstrate separate from the regression that [the variable] was required and affected performance.” *Id.* Applying this principle to this case would imply that the negotiation skills of borrowers would be

⁷ The term “included variable bias” is also used in Clogg, C.C. & Haritou, A., *The regression method of causal inference and the dilemma confronting this method*, in CAUSALITY IN CRISIS 83-112 (R. McKim & S.P. Turner, eds. 1997).

⁸ Thomas R. Ireland et. al, EXPERT ECONOMIC TESTIMONY: REFERENCE GUIDE FOR JUDGES AND ATTORNEYS (Lawyers & Judges Publishing Co. 1998).

an inappropriate variable to control for – unless Honda Finance can demonstrate that borrowers’ negotiation skill can affect their ability to perform their part of the contract – *i.e.*, repay the loan. Honda Finance has not provided this kind of evidence.⁹

This necessary exclusion of variables makes disparate impact analysis particularly well suited for class wide analysis. It is my understanding that class certification is only appropriate when there are “questions of law or fact common to the class” and in some circumstances may only be appropriate “when questions of law or fact common to the members of the class predominate over any questions affecting only individual members.” Disparate treatment tests may force researchers to control for more idiosyncratic variables that provide non-race causes for a decision-maker’s behavior. Information on these idiosyncratic variables may be difficult to obtain in a form that can readily be included in aggregate regression analysis. But disparate impact analysis is virtually always based on aggregate statistical analysis that controls for a smaller universe of factors.¹⁰

The purposeful exclusion of control variables is taken to an extreme with regard to the standard *prima facie* test for disparate racial impacts. In order to test for *prima facie* evidence of disparate racial impact, it is only necessary to control for factors that limit the analysis to a “qualified pool” of whites and African-Americans. For example, in the employment context, in testing whether an employer’s hiring practices have a disparate racial impact, it is appropriate to limit comparison to the group of candidates who are qualified in the sense of meeting minimum characteristics for

⁹ In fact, Honda Finance has not established that borrowers are even aware that the rates are negotiable or that the ultimate markup is the product of negotiation.

¹⁰ My opinion is consonant with Wright v. Circuit City Stores, 201 F.R.D. 526, 539 (N.D. Ala. 2001) (“[I]n a disparate impact claim where plaintiff claim practices that are facially neutral in their treatment of different groups, the commonality requirement may be more easily met than in a disparate treatment case.”).

employment. Thus, in the airline industry, it would be appropriate to limit the qualified pool of pilot applicants to those applicants who were licensed to fly. But under the facts of this case, the qualified pool is simply the class of Honda Finance borrowers. Honda Finance's own willingness to lend to this class is direct evidence that these borrowers were deemed by Honda Finance to be qualified borrowers (in the sense of having met Honda Finance's minimum characteristics for lending).

The appropriate test for assessing whether there is a *prima facie* disparate racial impact is both simple and straightforward. One must simply compare the average finance markup charged to African-Americans and white customers. To the extent one finds that the average finance markup paid by African-American Honda Finance customers is statistically larger than that paid by white Honda Finance customers, one can conclude that the Honda Finance credit pricing system (including the pricing authority it grants dealers for standard contracts) has a disparate racial impact. Accordingly, the standard test for *prima facie* case presents a "common question of fact" that can be answered with a single aggregate estimation.

It is my opinion that the statistics described in Dr. Mark Cohen's report constitute strong evidence of a *prima facie* disparate racial impact. African-American borrowers on average paid almost two and a half times the finance charge markup charged to whites: \$557 versus \$227, a difference of more than \$300. See Cohen Report, Table 1A. 43.3% of African-American borrowers were charged a markup, compared to only 22.2% of White borrowers. *Id.* If contracts booked under zero markup programs are excluded, this racial disparity grows to \$410 (average black markup of \$1,108 vs. \$698 for whites). *Id.* at, Table 1. These differences are highly significant in a statistical sense.

II. TESTS FOR EVIDENCE OF UNJUSTIFIED DISPARATE IMPACTS ARE AMENABLE TO AGGREGATE STATISTICAL ANALYSIS

It is also possible with aggregate data to use regression analysis to statistically analyze whether disparate racial impact persists after controlling for decision factors that “meet a legitimate business need.”¹¹ The idea here would be to include in a regression those variables that would reflect a legitimate business need for the discriminatory practice. If, after including these “legitimate business need” variables in the regression, the racial disparity is eliminated (or becomes statistically insignificant), then the regression indicates that the *prima facie* disparate impact is at least partially justified.¹²

This type of regression analysis is not experimental or on the fringe of statistics. It does not push the social science envelope of empiricism. If anything, more esoteric techniques are routinely accepted by courts in antitrust and patent litigation – which often need to control for selection effects

¹¹ The quoted language comes from commentaries on ECOA regulation:

The act and regulation may prohibit a creditor practice that is discriminatory in effect because it has a disproportionately negative impact on a prohibited basis, even though the creditor has no intent to discriminate and the practice appears neutral on its face, unless the creditor practice meets a legitimate business need that cannot reasonably be achieved as well by means that are less disparate in their impact.

Official Staff Commentary, to ECOA Regulation B, Section 202.6(a)-2.

¹² Note that the coefficients on the business-related variables must also correspond to the magnitude of the alleged business justification. For example, in this case, imagine that it was reasonable for dealers to charge a \$100 higher finance charge markup to a particular class of customers who on average expose the dealers to \$100 higher costs. In that case, it would be appropriate to include in the regression a control for this cost-related attribute. However, if the regression revealed that the dealers were charging customers with this attribute \$300 higher, then this supra-competitive charge of \$200 might still produce an unjustified disparate racial impact.

and endogeneity that are not at issue here.¹³ The kind of regressions that would be appropriate to use in this litigation – what economists call “ordinary least squares” regressions with a limited number of right-hand side variables – are a standard and generally accepted statistical technique.

Again, however, it is useful to contrast this “unjustified disparate impact” regression with a “disparate treatment” regression. In a disparate treatment regression, it is appropriate to include *any* variable that might provide a non-race basis for a given decision. Thus, even variables that are not related to the decisionmaker’s business might be properly included and might indicate a non-racial basis for superficial racial disparities.¹⁴

In contrast, *a regression testing for unjustified disparate impacts should only include those variables that would provide a valid business justification.* Thus, in the *Griggs* employment case, because the employer did not have a valid business reason for treating high school graduates differently from non-graduates, it would have been inappropriate to control for applicants’ graduation status. Because it is only appropriate to include (and hence control for) variables that would meet a legitimate business need, it is essential to spell out more explicitly what types of factors might constitute a legitimate business need.

¹³ See, e.g., David H. Kaye & David A. Freedman, “Reference Guide on Statistics,” in *Reference Manual on Scientific Evidence*, 2nd Edition, 83-178 (2000); Daniel L. Rubinfeld, “Reference Guide on Multiple Regression,” in *Reference Manual on Scientific Evidence*, 2nd Edition, 179-227 (2000) (*R*) Daniel L. Rubinfeld & Peter O. Steiner, “Quantitative Methods in Antitrust Litigation,” 46 *Law & Contemporary Problems* 69,-141 (1983); Daniel L. Rubinfeld, “Econometrics in the Courtroom,” 85 *Columbia Law Review* 1048-1097 (1985).

¹⁴ The only variables that should be excluded from a disparate treatment regression, as a matter of theory, are those non-race variables that are merely “pretexts” for masking what otherwise would be race-contingent decisionmaking or variables controlling for qualities not related to the decision being tested (e.g., controlling for astrological sign in a test of promotion decisions).

A. *What Constitutes a Legitimate Business Need*

It is my opinion that only attributes related to a decisionmaker's expected marginal cost¹⁵ provide a valid business justification – and hence only such attributes should be included in the business justification regression. This opinion resonates with the standard approach in the literature. For example, John Yinger succinctly describes (i) the problem of “included variable bias” (what he calls “diverting variable bias”); (ii) the need to purposefully exclude certain non-legitimate controls from a regression; and (iii) what constitutes “legitimate” controls:

Diverting variable bias arises when a variable that is not a legitimate control variable, but that is correlated with race or ethnicity, is included in the regression. The key issue, of course, is how to define what variables are “legitimate.” Under most circumstances, economists are taught to err on the side of including too many variables. In this case, however, illegitimate controls may pick up some of the effect of race or ethnicity and lead one to conclude that there is no discrimination when in fact there is. According to the definition of discrimination used here, legitimate controls are those associated with a person's qualifications to rent or buy a house, buy a car or so on—or to use a legal term business necessity.¹⁶

Notice that the legitimate controls turn on a person's ability to perform their part of the bargain. In the credit context, other scholars have similarly applied a performance standard for determining what characteristics are irrelevant:

Discrimination occurs whenever the terms of a transaction are affected by personal characteristics of the participants that are not relevant to the transaction. In credit markets, discrimination on the basis of race and/or gender would exist if loan approval rates or interest

¹⁵ “Marginal” cost refers to the cost of a seller supplying one additional item (or service). A “marginal” cost contrasts with a seller's “fixed” or “overhead” costs which are invariant to the number of items (or services) supplied. The concept of “cost” includes earning a reasonable profit as a return on capital invested.

¹⁶ John Yinger, *Evidence on Discrimination in Consumer Markets*, 12 J. Econ. Perspectives 23, 27 (Spring, 1998).

rates charged differed across groups with equal abilities to repay.¹⁷

Again, it is legitimate to control for factors that relate to a person's probable performance of her contractual commitment – which in the credit context is chiefly whether or not the loan will be repaid:

Discrimination may be apparent if banks approve loans to equally credit-worthy minority- and white-owned firms, but charge the minority-owned firms a higher rate of interest.¹⁸

Focusing on creditworthiness or the likelihood of repayment is also consistent with a standard that focuses on a decisionmaker's costs. Borrowers who fail to pay off their loans can impose substantial costs on a lender. It would be appropriate in analyzing a lender's decisions about the size of the “buy rate” to control for factors that effect the likely costs of default.¹⁹

It is my opinion, however, that attributes related solely to the potential for supra-competitive *revenues* that a dealership might extract from different classes of consumers do *not* constitute a valid business justification. Extracting supra-competitive revenues from a class of consumers – not because they impose higher costs on a seller but merely because the seller has the power to do so – is not consistent with business necessity. Sellers are justified in charging higher prices to cover their

¹⁷ David G. Blanchflower et al., *Discrimination in the Small Business Credit Market* 1 (NBER Working Paper 6840, 2002).

¹⁸ *Id.* at 19.

¹⁹ My economic opinion is consonant with judicial analysis as well. See *A.B. & S. Auto Service, Inc. v. South Shore Bank of Chicago*, 962 F.Supp. 1056, 1061 (ND Ill. 1997) (“[In a disparate impact claim under the ECOA], once the plaintiff has made the prima facie case, the defendant-lender must demonstrate that any policy, procedure, or practice has a manifest relationship to the creditworthiness of the applicant.... In other words, the onus is on the defendant to show that the particular practice make's defendant's credit evaluation system more predictive than it would be otherwise.”). See also *Lewis v. ACB Business Services, Inc.*, 135 F.3d 389, 406 (6th Cir. 1998) (“The Act was only intended to prohibit credit determinations based on characteristics unrelated to creditworthiness.”).

expected costs of serving particular types of consumers. Such pricing is consistent with business necessity. But sellers are not justified in charging higher prices to a disproportionately African-American class of consumers in order to make supra-competitive profits.

This distinction between cost-based and revenue-based attributes also resonates with the analogous disparate impact justification defense found in employment cases. Consider, for example, an employer who institutes a policy of paying employees who are the primary care givers of school children a substantially lower salary. Imagine that the policy has a disparate impact against women workers – who in this hypothetical are more likely to be the primary caregivers of grade school children.

The foregoing distinction would suggest that the employer would be justified in paying caregiving workers less if they were less productive or tended to impose higher turnover costs on the employer. Attributes that are associated with a person's performance of her side of the contract should be accounted for. But the employer should not be able to justify paying caregivers less solely because these employees have fewer employment alternatives (say, because of a lower ability to move to other cities). Even though the practice (of paying equally productive workers lower wages) increases the employer's profits, it is not consistent with standard economic theories laid out above as to what constitutes a legitimate business justification. Accordingly, it would not be appropriate to control for caregiver status in a regression testing for a unjustified disparate impact if the decisionmaker's reliance on this attribute was not based on the employees' ability to perform adequately on the job.

And indeed economists in analyzing employment discrimination almost exclusively focus on productivity differences that might explain race or gender disparities in wages. The goal of

statistical wage analysis is to get adequate measures of productivity as a potential alternative explanation for wage disparities, not to see if the disparity can be justified by particular employees' necessitude or negotiation skills. For example, in a similar ECOA case alleging discriminatory markups by NMAC, the defendant's expert economist testified:

Q. Have you ever written one word about the need to control for negotiation skills in an employment discrimination salary model?

A. No.

Q. Have you ever read one authoritative article that contends that it is appropriate in an employment discrimination salary model to include the independent variable of negotiation skills?

A. Not that I recall.

Cason v. NMAC, Deposition of Janet Thornton (July 23, 2001) at p. 239.

This cost/revenue distinction is also supported by the statutory language defining the scope of the business justification defense. The Civil Rights Act of 1991 defines a defendant policy as unjustified if:

*the respondent fails to demonstrate that the challenged practice is job related for the position in question and consistent with business necessity . . .*²⁰

It is straightforward to see how the "business necessity" language supports the distinction. It is "consistent with business necessity" to allow sellers to take into account cost attributes of its consumers. Sellers need to cover their costs to survive, but it is not necessary for them to charge supra-competitive prices. Competition may force firms to pay employees wages commensurate with their productivity (or to charge prices commensurate with their costs), but neither competition nor anything else forces an employer to exploit its market power over primary caregivers.

²⁰ 42 USCA s 2000e-2 (k) (1) (A) (ii) (1994) (emphasis added).

While the “job related” requirement of the statutory test is usually taken to impose a less demanding burden on defendants, it turns out that it also excludes an employer’s exploitation of market power as a defense. The statute does not say “business related” or “profitability related” but instead restricts the defense to policies that are “job related for the position in question” – that is related to employees’ ability to perform the particular job. The phrase “job related” hence can be used to exclude an employer’s attempts to rely on attributes that allow it to exploit its market power vis-a-vis certain types of employees. Returning to our original example, an employer who pays primary caregivers less not because they are less productive but solely because they have fewer employment alternatives should fail in attempting “to demonstrate that the challenged practice is job-related for the position in question.” Far from being related to the position in question, the employer’s decision to pay caregivers less would only be related to the absence of more competitive offers from other employers. The practice is related to the non-availability of other positions from other employers.

This distinction between cost-based and revenue-based attributes is also supported by a straightforward analysis of allocative efficiency. Cost-based pricing promotes economic efficiency – as goods tend to flow toward their highest use. When prices are based on cost, then consumers will only buy when they value the good or service more than its cost of production. An efficiency definition of “business justification” would accordingly tend to include cost-based pricing -- just as it would include employer wage-setting based on employee productivity.

But revenue-based pricing can retard economic efficiency. Supra-competitive prices can create what economists call “dead-weight losses” in efficiency where consumers who value the product more than its costs are nonetheless deterred from buying because of its inflated price. In this

case, some number of qualified borrowers may have been deterred from borrowing at the marked up interest rate when they would have borrowed at the buy rate. An efficiency definition of business justification would accordingly tend to exclude revenue-based price setting – just as it would exclude employer wage setting based on non-productivity factors.

This distinction between cost-based and revenue-based attributes is also supported by an analysis of market competition. Competition between sellers tends to drive out revenue-based pricing distinctions. Rivals in a competitive market will tend to undercut above-cost pricing. But competition will tend to re-enforce cost-based pricing distinctions. Sellers cannot simply ignore the expected cost of supplying particular consumer classes. Pricing distinctions that are a by-product of market competition provide a valid business justification, while pricing distinctions that are the by-product of market failure -- and indeed, can only persist in the absence of competition -- are invalid justifications.

But this discussion of competition may seem incomplete. The free-wheeling market forces that bring buyers and sellers together in marketplace negotiations seems like competition in its purest form. From this perspective, all this talk about supra-competitive pricing seems to be a misnomer, because under this conception, there can be no such thing as a supra-competitive price. The competitive price is whatever the market can bear.

The problem here is that there are competing ideas of what “competition” means. In one sense, competition is the struggle between a buyer and a seller to determine how they will split the potential gains of trade. To be sure, this is a kind of a competition. But antitrust law has long ago rejected this form of competition as a normative benchmark.²¹ Monopolists have never been able

²¹ My opinion is consonant with the Supreme Court’s recent opinion in Till v. SCS Credit Corp., 541 U.S. __ (May 17, 2004) (slip opinion):

to protect themselves by arguing that they were only charging what the market could bear or that consumers had consented to pay the contract price.²²

More important, civil rights law has similarly rejected this kind of “whatever the market will bear” standard. The law’s focus on job relatedness and performance attributes implies that the defense must be related to a decisionmaker’s costs of doing business. The employer who pays the caregiver less – not because she is less productive but because she is more necessitous – will not be able to justify the practice simply as “what the market would bear” or as simply the byproduct of freewheeling negotiations. A “what the market will bear” defense would negate large parts of the civil rights laws mandating non-discriminatory “terms and conditions” in employment and housing – because a defendant would simply use the plaintiffs’ consent to the discriminatory terms as a justification for its actions.

Defendant would like to argue simply that it is a “legitimate business need” for dealerships to maximize their profits by charging whatever price the market will bear. This argument makes eminent sense when the market is sufficiently competitive. Competition between rivals disciplines sellers to set prices so as to cover their costs. But when there is a market failure (either in the sense

[Federal and state regulation of subprime lending] evinces regulators’ belief that unregulated subprime lenders would exploit borrowers’ ignorance and charge rates above what a competitive market would allow.

Id. at 16.

²² What the market will bear is here crucially determined by the lack of seller disclosure. As discussed below, many consumers would not be willing to bear such a high markup if Honda Finance disclosed more information about their discretionary markup policies. Again the Supreme Court’s analysis of the pro-competitive benefits of disclosure is consonant with my opinion:

Congress enacted the Truth in Lending Act in part because it believed consumers would individually benefit not only from the more informed use of credit, but also from heightened competition which would result from more knowledgeable credit shopping.

Till v. SCS Credit Corp., 541 U.S. __ (May 17, 2004) (slip opinion at 16).

of there not being alternative sources of finance or in consumers being imperfectly informed about these alternative sources), then the price charged will bear no relation to a dealership's expected cost. When the market fails, the maximum that dealerships can charge will not be the amount that the "market" can bear but instead it will be determined by what the individual consumer can bear. Maximizing profit by any means possible is not a business justification, because "price gouging" (that is, the motive to extract supra-competitive prices from consumers) does not provide an economic justification for what would otherwise be an actionable disparate impact.

I use the term "price gouging" advisedly. Dr. Cohen found that Honda Finance charges 10% of its borrowers more than a \$1000 markup. Cohen Report, Table 16A. And this figure rises to more than \$1800 if contracts booked under Zero markup programs are excluded. Cohen Report, Table 16. This 10% of borrowers produce more than 65% of the total markup profits (a mere 5% of Honda Finance borrowers produce 41% of the total markup profits). Cohen Report, Table 6. Moreover, this group of the most profitable borrowers is disproportionately black: while black borrowers are only 11.6% of the overall sample of loans, they represent 26.5% of borrowers in this top decile of markup profitability. *Id.* Or analyzed alternatively, African Americans are only 11.6% of Honda Finance borrowers, but they pay 24.2% of the markup profits. *Id.*

The top 500 borrowers (from the 15 race coded states) each paid more than a \$3600 markup (the highest markup was more than \$6,000 on a \$35,000 loan). And, again, black borrowers were disproportionately represented in the high markup loans: African-Americans are only 11.47% of the Honda Finance borrowers in the 15 states but they represent 36.4% of the these 500 most-profitable markups. Cohen Report, Appendix D. Markup disparities of this magnitude are not plausibly driven by the costs of doing business with types of customers.

The next two subsections apply the foregoing justification theory to more particular assertions of defendants in similar cases brought under the ECOA – that consideration of legitimate business needs would require a fact-intensive inquiry that would make this case inappropriate for class certification. It is my opinion that these assertions are mistaken. First, evidence of borrowers’ individual creditworthiness can be controlled for in an aggregate analysis, because all of the individualized factors upon which Honda Finance relies for determinations of borrowers’ creditworthiness already exist in Honda Finance’s centralized electronic databases. Second, it is inappropriate for this Court to conduct an individualized (disaggregated) inquiry into each borrower’s negotiation skills, preferences and a host of other factors that might affect the ability of dealerships to extract supra-competitive revenue from individual borrowers. The defendant has failed to establish any relationship between these individualized factors and either the dealer’s or Honda Finance’s cost of providing lending services. Accordingly, the absence of these factors from the aggregate electronic databases does not render this case less amenable to aggregate statistical analysis.

B. Creditworthiness Justifications

While default-risk factors would clearly be appropriate to include in an analysis of business justification if this case involved a claimed racial disparity in the booked “buy rate”²³ set by Honda Finance, it is my opinion that default-risk factors do not constitute a legitimate business need to justify racial disparities in the financial charges that are imposed over and above the buy rate.

In this case, Honda Finance’s credit pricing system makes the dealer the relevant

²³ The “buy rate” is the risk-adjusted rate that Honda Finance sets based on borrower’s credit information.

decisionmaker with regard to discretionary markups, because it is Honda Finance's system that authorizes the dealer to impose different markups upon individual borrowers (unless constrained by one of Honda Finance's policies). The structure of the transaction normally gives (1) the dealer decisionmaking pricing authority (within the parameters set by Honda Finance) and (2) 75-100% of any markup value to the dealer as an immediate cash payment. The dealership as the relevant decisionmaker does not bear any economic risk of borrower default,²⁴ and does not have a financial incentive to take such risk into account when imposing the markup amount upon individual borrowers.

Borrower attributes related to the risk of default thus do not constitute factors related to an expected marginal cost of the dealer and thus do not constitute a plausible basis for business justification. Since, under Honda Finance's credit pricing system, dealerships are granted the authority on selected loans to impose finance charge markups (as constrained by Honda Finance's centralized policies), the question of whether a particular attribute is business-related is whether the dealerships' expected cost of arranging and/or processing loans varies with this attribute. For example, if defendant could demonstrate that a dealership's expected (paperwork or labor) costs of arranging Honda Finance financing were \$100 greater for customers with attribute X, then the

²⁴ Some dealerships opt for a plan under which they are immediately credited for 100% of the "dealer participation" amount for marking up loans, but a portion of this amount will be subject to refund if the borrower either pays off or defaults on a loan. On this subset of loans, dealerships accordingly do bear a risk of losing a portion of their markup commission, but this risk of loss of markup commission is starkly distinct from the risk of loss of capital (a.k.a. default risk). Dr. Cohen has shown that even after controlling for the quality of the credit tier that racial disparities in markups persist. Cohen Report, Table 15. And as emphasized below, none of the defendant deponents indicated that dealers take the risk of losing this markup profit into account in deciding what markup to quote potential borrowers. See, e.g., Deposition of Richard H. Houchins (Feb. 25, 2004) at 37 ("Q: Do you consider any factors – credit-worthiness factors in deciding how much to mark up a customer? A: No.").

dealership would have a business justification for charging a \$100 higher finance charge markup to consumers with attribute X. It would then also be appropriate to include a control variable for attribute X in the “business justification” regression to test whether an unjustified disparate racial impact persisted after controlling for the business-related attribute. But it is important to emphasize that Honda Finance has never alleged that the markups quoted by dealers are driven by the dealers’ expected marginal costs of arranging the loan.²⁵

It is certainly possible to undertake an aggregated statistical analysis that controls for individual borrowers’ credit tier assignment as well as a host of other credit variables contained in Honda Finance’s electronic databases. But these factors are not rationally related to the dealers’ decisionmaking. A dealer, in deciding how much of a markup to add to a particular financing customer, bears no costs related to either the creditworthiness or the credit tier assignment of that customer. The dealer’s sole economic motive is to set the highest markup that he or she believes the customer is willing to accept, within the policy parameters authorized by Honda Finance.

It is necessary to exclude credit tier assignment from the regression so that we can test whether Honda Finance’s own policies regarding the maximum markups that can be charged under different loan programs produce a disparate racial impact. After all, Honda Finance’s decision to allow markup caps that are 75% higher on the “standard” tier than on the “preferred” credit tier (3.5% v.s 2%) has a predictable impact on the markups ultimately paid by white and black borrowers.

²⁵ Moreover, some variables related to probable costs of loan arrangement exist in Honda Finance’s centralized electronic databases and hence can be controlled for in aggregate statistical analysis. For example, Mark Cohen has analyzed the difference in minutes between the time the application is received and the time a notification is sent back to the dealer and found persistent racial disparities in markups even after controlling for this variable. Cohen Report, Table 23.

Moreover, Honda Finance's policy of granting dealers discretion to place borrowers with similar credit risk into loan programs with different markup caps might be an important contributing cause to the overall racial disparity in markups. For example, Dr. Cohen found that among borrowers of a particular credit quality grade, that black borrowers were less likely to be booked into Zero markup programs. For example, in credit quality grade A in 1999 black borrowers comprised 10.74% of contracts booked under markup programs. In contrast, black borrowers in credit quality grade A comprised only 6.12% of contracts booked under Zero markup programs. Cohen Report, Table 9. Blacks are under-represented in Zero markup programs for each quality grade every year from 1999-2003. Allowing dealers to steer borrowers with similar credit grades into different loan programs in turn impacted the markups of white and black borrowers. Cohen found that the median markup for credit quality grade D was \$780 for black borrowers but \$0 for white borrowers. Cohen Report, Table 15A.

Cohen also found that among borrowers who are eligible for a given credit tier black borrowers were systematically more likely than white borrowers to be booked into less favorable credit tiers than for which they were qualified. For example before 2002, 34.34% of the black borrowers who were eligible for the "Preferred" credit tier were instead booked into the "Standard" credit tier contracts with higher "buy rates". In contrast, only 18.79% of white borrowers who were eligible for the "Preferred credit tier, were booked in to "Standard" credit tier loans. Cohen Report, Table 27. To test only whether there is a racial disparity in markups after controlling for credit tier assignment effectively would preclude plaintiffs from being able to test whether Honda Finance's policy of allowing dealers to steer similar borrowers into different credit tiers and or markup programs contributed to the racial disparity.

Even if – counter to my opinion – the court finds that it is appropriate to consider the creditworthiness of individual borrowers,²⁶ this does not suggest that aggregate statistical analysis becomes infeasible. Honda Finance’s centralized electronic databases include abundant and comprehensive evidence of the individual borrower’s creditworthiness. Honda Finance itself uses aggregate statistical analysis to assess creditworthiness. Honda Finance’s electronic data allows it to statistically evaluate factors related to the borrower’s credit history (both with Honda Finance and other lenders), the loan collateral, the borrower’s “capacity” to borrow and the borrower’s stability.

The credit industry is in many ways unique in amassing centralized and aggregatable data on the creditworthiness of individual borrowers. The use of statistical “credit scoring” systems to determine whether to grant a loan and at what rate is well established and has largely replaced more subjective determinations. As one reviewer of the credit scoring approach noted:

The arrival of credit cards in the late 1960s made the banks and other credit card issuers realize the usefulness of credit scoring. The number of people applying for credit cards each day made it impossible both in economic and manpower terms to do anything but automate the lending decision. When these organizations used credit scoring, they found that it also was a much better predictor than any judgmental scheme and default rates would drop by 50% or more . . .

The event that ensured the complete acceptance of credit scoring was the passing of the Equal Credit Opportunity Acts (ECOA 1975, ECOA 1976) in the US in 1975 and 1976.²⁷

Regulation B of ECOA comprehensively regulates the workings of “credit scoring systems” to assess creditworthiness:

²⁶ Because creditworthiness and the default risk has already been factored into the cost of the loan (that is, the “buy rate”), creditworthiness is not a legitimate factor to consider as an explanatory variable for the markup. To permit it as an explanatory variable would be to count it twice.

²⁷ Lyn C. Thomas, *A Survey of Credit and Behavioural Scoring: Forecasting financial risk of lending to consumers*, Credit Research Centre Working Paper 99/2.

To qualify as an empirically derived, demonstrably and statistically sound, credit scoring system, the system must be: (i) Based on data that are derived from an empirical comparison of sample groups of the population of creditworthy and noncreditworthy applicants who applied for credit within a reasonable preceding period of time; (ii) Developed for the purpose of evaluating the creditworthiness of applicants with respect to the legitimate business interests of the creditor utilizing the system (including, but not limited to, minimizing bad debt losses and operating expenses in accordance with the creditor's business judgment); (iii) Developed and validated using accepted statistical principles and methodology; and (iv) Periodically revalidated by the use of appropriate statistical principles and methodology and adjusted as necessary to maintain predictive ability.

Regulation B §202.2 (p).

A comparison with employment is again instructive. In the employment setting, reliable measures of worker productivity are at times difficult to come by. Normally employers do not maintain a centralized electronic database with estimates of applicant productivity. But in sharp contrast, modern lenders do maintain centralized electronic databases with explicit estimates of applicant creditworthiness. This means that credit disputes are much more amenable than employment disputes to class-wide disparate impact analysis that avoids individualized fact finding.

As a court in the Third Circuit recently found:

Creditworthiness is quantifiable and easily susceptible to comparison. Therefore, through statistical analysis and comparison on similarly creditworthy applicants, purchasing similar automobiles, within a set increment of time of one another, both Plaintiffs and Defendants may prove their case without the significant participation of individual aggrieved applicants. This spares the court from engaging in case by case determinations....

CEIBA, Inc. v. Ford Motor Credit Co., 2003 WL 22204560, at *4 (E.D. Pa., Sept. 22, 2003).²⁸

The hallmark of Honda Finance's credit scoring system is mechanistic decisionmaking. Honda Finance customers can and do qualify for financing via the Internet without ever seeing a

²⁸ While it is computationally feasible to limit statistical analysis to a comparison of "similarly creditworthy applicants, purchasing similar automobiles, within a set increment of time of one another," it is inappropriate to do. Controlling for these factors would only be appropriate if defendant could show that they were related to the dealers' cost of arranging loans.

dealership. This is an industry:

- where lending decisions are made quintessentially at a distance;
- where lending decisions are made en masse by automated systems; and
- where lending decisions are based on the formulaic application of non-subjective, statistically-validated criteria.

The whole purpose of this centralized credit scoring process is to base credit determinations on arms-length, non-subjective criteria whose validity can be periodically assessed with aggregate statistical analysis. Given that Honda Finance exclusively bears the risk of non-repayment of its principal and that it bases its lending and buy-rate decisions exclusively on information that is embedded in its available databases, it is disingenuous to argue that dealerships (who are not bearing any risk of non-repayment of principal) are nonetheless making risk-based decisions.

C. Revenue-Based Justifications

The defendant may argue that numerous revenue-based factors, including buyer negotiation skills, knowledge, preferences and self-assessment of creditworthiness affect the markups that are actually paid and must be controlled for in any test of disparate impacts. Because these idiosyncratic factors are not contained in Honda Finance databases, they would be more difficult to control for in aggregate statistical analysis.

As an initial matter, it is implausible that there would be a legitimate business need to base the finance markup on types of information that Honda Finance makes no attempt to collect in its databases and centrally assess. The entire impetus of the credit industry, as just emphasized, has been to centrally collect and assess all information relevant to the credit decision. Moreover, Honda Finance has not produced any evidence suggesting how and whether this list of factors actually

impacts financial markups. Nor has it explained why relying on these attributes would constitute a legitimate business need.

But the crucial similarity between this otherwise amorphous list of attributes is that none of them concern either the dealers' or Honda Finance's costs of providing lending services. These attributes are not related to the individual borrowers' ability to repay the loan or a dealership's expected cost of arranging the loan. Indeed, it is my expert opinion that variation in markups uncovered to date in the data cannot plausibly be driven by differences in either the dealers' or Honda Finance's cost of providing lending services to particular borrowers. Instead, this amorphous list of idiosyncratic borrower attributes is, if anything, related only to the ability of dealerships to extract supra-competitive revenue from individual borrowers.

I do not deny that these attributes might have impacted the markup amount of particular individuals. The dealers' attempts to extract supra-competitive revenue from borrowers may have been based on factors that are not readily ascertainable and hence cannot be easily controlled in aggregate statistical analysis.

But nonetheless it is my opinion that these factors should not be controlled for in regressions testing for unjustified disparate impacts. These factors should be excluded from the aggregate analysis, not because they have no arguable effect, but because any effects that they might have had do not qualify as legitimate business needs. As discussed above, allowing dealerships to extract supra-competitive finance charge markups does not constitute a legitimate business need. Indeed, economic theory suggests that such behavior can only exist in the *absence* of competition. Business justifications should be a by-product of market competition, not a by-product of market failure. Less competitive markets should not have more freedom to impose racially disparate finance charge

markups.

It might initially seem that such demand-side factors (indicating buyers' willingness and ability to pay) are part of the natural competitive process in which both supply and demand characteristics determine the competitive terms of trade. But in a rivalrous market in which goods are competitively supplied, price is determined by sellers' costs and not by individual buyers' willingness or ability to pay. Demand-side factors only influence pricing in the presence of some market imperfection. It is business justified for sellers to price according to their costs; a policy or practice causing a disparate racial impact, however, is *not* justified by a seller's motive to charge supra-competitive prices.

The analogy to employment is again apposite. It is a legitimate business need for an employer to pay primary caregivers less if they were less productive or imposed higher costs on the firm. But a wage structure that imposes a disparate impact on women is not justified if it pays primary caregivers less, not because they are less productive, but merely because they are more necessitous of employment and hence more willing to work for a lower, sub-competitive wage. Indeed, to make the analogy even closer, it would not be a "legitimate business need" for employers to pay their caregiving workers less merely because they had different negotiation skills, preferences, or self-assessment of productivity.

In this case, testimony from finance managers or borrowers about individual transactions would not aid the decisionmaking of a trier of fact. Such testimony might provide evidence of the finance manager's subjective motives for charging particular markups. But whether these motives provide a legitimate business need would ultimately turn on an aggregate analysis of particular policies. Proof that a particular factor constituted a justification would have depended on a

centralized statistical assessment – not the mere testimony of individual actors that they relied on a factor in setting the markup because they believed it to be justified.

Even if information about individual borrower negotiation characteristics were available, it would be my opinion that it should not be controlled for in a test of whether defendant’s policies produced an unjustified disparate impact.²⁹ The defendant’s policy of allowing dealerships on selected loans to extract supra-competitive finance charge markups based on borrower revenue characteristics might itself have caused a disparate racial impact. To control for revenue-based factors would improperly eliminate the possibility of testing for this disparate impact.³⁰

III. ALTERNATIVE MARKUP POLICIES WOULD REDUCE THE OBSERVED RACIAL MARKUP DISPARITY

A wide variety of alternative markup policies exist that could achieve Honda Finance’s legitimate business needs to cover its costs of doing business and to earn a reasonable profit, but would be “less disparate in their impact.” *Official Staff Commentary*, to ECOA Regulation B,

²⁹ It is telling, however, that racial disparities persist even among borrowers with the same occupation. Cohen Report, Table 28 and 28A. To the extent that we might expect lawyers, (or nurses or police) to have relatively similar negotiation skills, this finding suggests that negotiation skills are not driving the racial disparities.

³⁰ Honda Finance may also contend that they would need to introduce evidence about the markup policies of each dealership. To the extent that these policies are merely different attempts of the dealerships to extract supra-competitive profits, these controls should be excluded from the regression analysis for the same reasons discussed above. Honda Finance has not demonstrated a business need for allowing dealers to have idiosyncratic markup policies.

But even if one wanted to control for possibly idiosyncratic dealership policies, it would be possible to do this in aggregate statistical analysis without having to introduce testimony from each dealership. Indeed, Dr. Cohen has already run regressions including what economists call dealership “fixed effects” which estimate the dealership specific markup averages for each and every dealership in the database. Cohen Report, Appendix C.

Section 202.6(a)-2. Most basically, it is my opinion that any system that reduced the dealerships' subjective discretion in setting markups is likely to reduce the racial disparities estimated by Dr. Cohen in the existing data. In this section, I will discuss fixed fees, markup caps, commission cap, affirmative lending and disclosure alternatives.

A. Fixed Fees

A system which compensated the dealers with a flat dollar amount for assisting borrowers in arranging loans would eliminate all of the markup racial disparity. A fixed amount would also not constrain Honda Finance's ability to compensate dealers for their time. A fixed fee of any amount – whether \$250, \$500 or some other amount – would be equally effective in eliminating the racial markup disparities. But many other systems exist that would also have the effect of reducing dealerships' discretion and would likely reduce the racial disparities uncovered in the data.

Moreover, as long as the across-the-board fee is set at an sufficiently high level, a fixed fee compensation system need not reduce the dealer's compensation for helping to arrange loans. For example, the owner of the Armory Automotive dealership as part of settlement with the New York Attorney General agreed to forego any markup profits on loans and instead to be compensated solely by fixed fees. The owner of the dealership in a recent article said that he expected higher profits under the new system. *NY Dealer Sees Spitzer Settlement As A Win*, CAR DEALER INSIDER 1 (April 5, 2004):

Metzner [the dealership owner] figures the average fee is about \$225, but will rise to \$300-350 as more lenders come on board and he negotiates higher fees. . . . "I think we'll make more money this way," says Metzner. The bank referral fees won't equal the revenue from the markups but Metzner expects to increase penetration by 20% to 30% and compensate in volume.

Id. at 1-3. A similar point was made with regard to the compensation restriction growing out of the NMAC settlement. *Loan Bias Settlement: New Disclosures, No Markups*, CAR DEALER INSIDER ONLINE (February 24, 2003) (“Stores don’t expect settlement to harm F&I Income”).

Toyota has voluntarily launched an Internet financing service, called “Scion,” that prohibits dealership markups on loans and instead pays a fixed fee. Using the Scion service, an applicant can not only apply for financing on the Internet, but can learn the exact interest rate for which he or she qualifies. *Scion Offers Financing to Young Buyers*, AUTOMOTIVE NEWS (June 9, 2003). Carmax appears to offer a similar service. See www.carmax.com/dyn/research/dealerpricing/games.aspx

A substantial proportion of car loans made both by Honda Finance and other lenders already use a fixed dollar compensation scheme. The voluntary movement of the industry toward fixed fee compensation undermines any claim that such a compensation system would have dire consequences. If Honda Finance committed to compensating dealers on all their loans by a single, fixed dollar amount, it would give dealerships sufficient incentives to arrange loans and it would end the racial disparities in loan arrangement compensation. Even a fixed percentage compensation or a fixed fee that was contingent on the amount financed would dramatically reduce the racial disparity.

B. Markup Caps

A system with dollar or percentage caps (or ceilings) on the maximum markup that could be added on by dealerships would also reduce the racial disparities. The lower the caps, the lower the likely disparities. This result is not just a theoretical inference, but has abundant support in the data. Dr. Cohen has estimated the lower racial disparities that would have been produced if \$1000, \$750

and \$500 markup caps had been imposed in the past. The racial observed disparity would have been almost halved by simply imposing a \$1000 cap on the data, and the disparity would have been halved again – falling to just \$102 – if a \$500 cap had been instituted.³¹

Dr. Cohen has also shown that racial disparities were substantially reduced in jurisdictions that by law limited dealerships' abilities to mark up loans. Data from Arkansas and Ohio showed a racial disparity that was less than half the size found in others states without these legal restrictions.³² Moreover, Honda Finance's own selective use of percentage markup caps for particular programs shows that the lower caps predictably reduce racial disparities. Dr. Cohen estimated that Honda Finance's loans with a 3.5% markup cap had an average racial disparity of \$353, while loans with a 2% markup had a racial disparity of only \$295.³³

Industry participants themselves have begun to embrace markup caps. See *Opinion: California Sounds Strict Warning on Finance Reserve*, AUTOMOTIVE NEWS (July 28, 2003). Various lenders in the industry have recently begun imposing smaller caps on extended term loans or loans over a certain dollar amount. See, e.g., *Trustmark Rate Sheet*, (May 1, 2004) (setting 1% markup on certain loans between 67 and 72 months). See also *Nowadays, F&I Should Mean Fair and Impartial*, AUTOMOTIVE NEWS (Jan. 12, 2004) ("Most responsible banks and finance companies are capping the finance reserve at three percentage points."); *Cut To the Quick*, AUTOMOTIVE NEWS

³¹ See Cohen Report, Table 32.

³² See Cohen Report, Table 2 and accompanying text.

³³ See Cohen Report, Figure 4. Moreover, when you analyze 3.5% markup cap contracts together with the 2% markup cap contracts, the overall disparity increases to \$410. Cohen Report, Table 1. The racial disparity increases because a disproportionate number of whites are beneficiaries of the 2% cap (and have an average markup of \$477) while a disproportionate number of blacks are subjected to the 3.5% cap (and have an average markup of \$1,575). See Cohen Report, Figure 3.

(Dec. 1, 2003) (“Rate caps have little effect on loan profit already clipped by sharp competition among lenders”). The increasing use of reduced markup caps to restrain “unreasonable” dealership behavior is supported by industry action itself.

C. Commission Caps

Besides imposing hard dollar or percentage markup caps, Honda Finance could, as an alternative, predictably reduce racial disparities by reducing dealers’ incentive to set high markups. Capping the dealers’ commission for setting a high markup loan would discourage dealerships from extracting such large markups from some of their customers.

A commission could be capped in dollar or percentage terms. A dollar cap might, for example, cap dealership commissions at \$250, \$500 or some other amount. A percentage commission cap would limit the percentage of the markup profit that the dealer could claim as compensation. Percentage commission caps could also progressively reduce the percentage commission on the incremental markup profit as the markup profit increased. Lowering the commission percentage (or lowering the markup point at which a commission is paid to 2% points) would likely reduce the racial disparity in markups.

D. Affirmative Lending

Honda Finance might also reduce the racial disparity in markups by engaging in a variety of efforts that might be characterized as “affirmative lending.” It is my understanding that under certain circumstances a lender may be permitted to establish a “special purpose credit program” in which “all program participants may be required to share one or more common characteristic (for example,

race . . .).” ECOA Regulation B, 202.8(b)(2).

In particular, ECOA under certain circumstances may allow a creditor to “affirmatively solicit or encourage members of traditionally disadvantaged groups to apply for credits . . .” See ECOA Regulation B, *Official Staff Interpretations* 202.4(b) If Honda Finance affirmatively solicited potential African-American borrowers to apply for special rate contracts that were not subject to markup, such “affirmative advertising” would likely cause a reduction in the racial markup disparity by reducing the average markup paid by black borrowers. In the recent Nissan Motors Acceptance Corporation (NMAC) settlement, NMAC apparently agreed to a special program in which it would offer 675,000 no-markup loans to African-American borrowers over the course of 5 years. See Cason v. NMAC, Cohen Declaration (March 15, 2003). Similarly, General Motors Acceptance Corporation (GMAC) apparently also agreed in its recent settlement to a special program in which it would offer 1,250,000 no-markup loans to African-American borrowers over the course of 5 years. See GMAC Settlement Agreement, February 10, 2004, par. 8.5.2. Analogous actions by Honda Finance would predictably reduce the racial markup disparities.

Or in the alternative if Honda Finance established tailored programs that capped the markup or the dealership commissions on the types of loans where African Americans are disproportionately represented and markups are disproportionately high, these targeted programs would predictably reduce the expected markup disparities. There are a wide-variety of race-contingent solicitations and offers – as well as race-neutral strategies targeted to pockets of consumers where African Americans are disproportionately taken advantage of – that would predictably lessen the markup disparity.

E. *Point of Purchase Disclosure*

Honda Finance might also predictably reduce racial disparities in markups by mandating that dealers conspicuously disclose at the time of lending various types of markup information. For example, racial markup disparities would likely be reduced by effectively disclosing to potential borrowers jointly or severally any of the following pieces of information:

- (a) the A.P.R. is negotiable;
- (b) the size of the dealership's compensation in both dollar and percentage points terms;
- (c) the average (and/or median) dealership compensations in both dollar and percentage terms for loans of this type;
- (d) the size of the total markup in both dollar and percentage terms;
- (e) the "buy rate"; and/or
- (f) the ability of the dealership to negotiate an A.P.R. as low as the buy rate.

Imagine, for example, that a borrower, who was about to agree to a loan which incorporated more than a \$1000 of dealership compensation, learned not only the size of the dealership's compensation but also learned that the dealership normally only earned \$200 compensation. Such a consumer is more likely to ask for a lower rate and/or seek a competitive offer (which in turn will deter a dealership from offering a high rate in the first place). It is my opinion that this type of disclosure is likely to reduce the variance in markups and in all likelihood the racial disparities produced by the current system. See Ian Ayres & F. Clayton Miller, *"I'll Sell It To You at Cost:" Legal Methods to Promote Retail Markup Disclosure*, 84 NORTHWESTERN LAW REVIEW 1047 (1990).

Disclosures must be meaningful. A brief mention of negotiability by itself is not likely to be nearly as powerful as quantitative evidence about the size of the proposed markup, the size of the average markup, or the size of the buy rate. Requiring dealerships to provide point-of-purchase

disclosure with quantitative information that had to be acknowledged by a borrower with a separate signature before the loan was finalized would likely be much more effective in reducing the disparate racial impact of the current markup policy.

And again, industry observers have expressed support for increased point-of-purchase disclosure. The industry publication, *Automotive News*, has recently opined:

Disclosure isn't required by federal regulations. But if the dealership discloses its share of the deal - which at 3 points or less is a reasonable fee for service - there's no moral problem. It's just business. If the customer knows what's going on, everything is fine... As always, honesty is the only policy.

Opinion: *California Sounds Strict Warning on Finance Reserve*, AUTOMOTIVE NEWS (July 28, 2003). See also *No More F&I Secrets*, AUTOMOTIVE NEWS (February 9, 2004) (“[M]any customers believe that the rate quoted in the finance and insurance office is the bank’s rate. Then later they are shocked to learn that the dealer made some money on the deal. In the future the dealer will be explicit that’s he’s being paid for the service. That’s not a bad thing.”).

F. *Pre-Purchase Advertisements*

Pre-purchase advertisements could also play an important role both in reducing racial disparities in Honda Finance markups and in discouraging dealers from shifting business to other lenders who allow the dealers to extract supra-competitive markups. Honda Finance is likely to contend that if they went too far in constraining dealerships from marking up loans, that the dealerships would simply shift the business to other lenders who did not impose such markup constraints. In essence, Honda Finance would be arguing that they must let their dealers engage in at least a limited amount of price gouging or the dealers will send this business to other lenders who

will.³⁴

It is my understanding as a legal matter, however, that this “meeting the competition” defense does not constitute a valid business defense. Competition from other discriminating companies does not justify what otherwise would be actionable discrimination. In the employment context, firms are not allowed to argue that they are justified in discriminating against women employees because, if they don’t, customers will switch to other businesses who do discriminate. Rather the standard is whether you would be at a competitive disadvantage if all firms were held to the same duties of non-discrimination.

Moreover, Honda Finance could take affirmative actions that would simultaneously reduce the racial markup disparity and simultaneously constrain the ability of dealers to shift business to alternative lenders who imposed few markup constraints. In particular, Honda Finance could publicly advertise that Honda Finance was leading the industry in offering fairly priced automobile loans. For example, imagine the impact of a Honda Finance commercial that explained:

Honda Finance and Honda dealers are committed to honest credit practices. Honda Finance loans clearly state the dealership’s total compensation for helping you arrange your loan. When you finance through Honda Finance at a Honda dealership, you can be assured that your credit is priced fairly - based on the credit rating you have earned. So next time you’re financing a new car, make sure you demand to see the Honda Finance-certified compensation statement that is part of every Honda Finance loan.

Such an ad would tend to limit dealers’ ability to shift loan business to less scrupulous lenders. Pre-purchase advertising is already intentionally used in part to have just this effect. Consumers who become aware from a commercial that a specially advertized rate is available are more likely to come

³⁴ Honda Finance currently imposes a 2 point cap for two of its preferred new car tiers and for its entire used car program. However, it has offered no economic justification for allowing 3.5% markups for on standard tier new car loans – which disproportionately go to African-American borrowers.

into the dealership asking about the advertized Honda Finance rate and are more likely to question the dealer who tries to substitute another lenders' loan that offers a higher A.P.R. Similarly, the foregoing "honest credit practices" ad will cause some consumers to demand a Honda Finance-certified compensation statement when financing with a Honda dealership and are more likely to question whether an alternative lender is paying the dealer an undisclosed kickback for arranging the loan.³⁵

The point of imagining the effects of such an advertisement is not to be so presumptuous as to suggest that I have identified the most effective "ad copy" for these purposes. Instead, the purpose in this sub-section – as in the larger discussion – is to show that there are multiple dimensions of behavior that would likely reduce the observed racial markup disparities. Many of these dimensions – including markup caps, limiting dealership compensation and pre-purchase advertisements – have some antecedents in the defendant's own behavior and thus would only require extensions and strengthening of pre-existing policy.

The six different types of policies discussed in this section used jointly or severally would still allow Honda Finance to base its lending decision on borrower characteristics that have a "demonstrable relationship to a determination of creditworthiness." ECOA Regulation B 202.2(y). These disparity reducing policies would not interfere with Honda Finance's legitimate business needs to cover its costs of doing business and to earn a reasonable profit. Put simply, limiting dealers' discretion to charge excessive (supra-competitive) markups can reduce racial disparities

³⁵ The Scion Internet service is another way of assuring customers that the dealer will not be able to inflate the interest rate. Since the applicant learns of his or her qualified APR before entering the dealership, he or she can rest assured that it is in some sense a certified rate.

without impeding Honda Finance's or dealers' legitimate business needs.³⁶

IV. CAUSAL THEORIES OF THE RACIALLY DISPARATE FINANCE CHARGE MARKUPS

Providing possible causal explanations for the substantial racial disparities found is probative that the racial disparities themselves exist in that it offers a credible and compelling explanation for how Honda Finance's finance process itself could have given rise to the disparate impact uncovered in Dr. Cohen's statistical analysis. In fact, anecdotal and ancillary evidence is often introduced to support and explain statistical proof.³⁷ This section discusses evidence supporting two broad causal explanations for the racial disparities in finance charge markups uncovered in Dr. Cohen's expert report.

A. Racially Influenced Decisionmaking

Honda Finance's policy of granting substantial credit-pricing discretion to dealerships is likely a direct cause of the racial disparity. Honda Finance's policies authorize and encourage the dealerships to mark up a substantial number of loans to both white and African-American borrowers.

³⁶ The tailoring of these injunctive solutions does not require fact-intensive inquiry into the thought processes of dozens or hundreds of individual finance managers. Since the hallmark of these interventions is to move to a system with less subjective and less discretionary decisionmaking exercised by individual dealerships, the information necessary to tailor such a remedy should also be amenable to a fact-finding process based on more aggregated analysis of the effects of particular injunctive remedies.

³⁷ See, e.g., *Perez v. F.B.I.*, 707 F. Supp. 891, 900-901 (W.D. Tex. 1988), *aff'd* 956 F.2d 265 (CA 5 1992) ("[A]necdotal testimony provides the context by which to understand statistical models. Conversely, the statistical picture provides a context by which to understand the detailed histories of class members. Similar to the axiom about the view of the 'forest and the trees,' each bears scrutiny and prudent persons apply the lessons of one view to interpret the other."); *Int'l Bhd. of Teamsters v. Unites States*, 431 U.S. 324, 339 (1977)(anecdotal evidence"bring[s] the cold numbers convincingly to life").

This and the next subsection explore two theories to explain how the defendant's policy of authorizing subjective dealership markups might have caused dealerships to impose disparate finance charge markups on African-American borrowers. The first theory is that racially-contingent pricing decisions by dealers is responsible for a portion of the racial disparity; the second is that non-race inferences by dealers about the potential to charge supra-competitive markups account for a portion of the disparity.

The theory that the racial disparities in finance charge markups are the by-product (at least in part) of racially influenced credit pricing decisions in no way implies that dealerships must harbor animus toward African-Americans or that they are engaging in intentional discrimination. There are, for example, a number of studies that have found that economic decisionmakers are influenced by racially conscious or unconscious stereotypes.³⁸ For example, the Implicit Attitudes Tests (which can be completed in less than 5 minutes on the Internet)³⁹ suggest that many people of professed goodwill find it impossible not to treat African-American pictures differently than white pictures when asked to perform a simple sorting exercise. These tests are part of a growing literature documenting unconscious bias against African-Americans.⁴⁰ These studies are relevant to this

³⁸ See, e.g., Joleen Kirschenman and Kathryn M. Neckerman, "We'd Love to Hire Them But ...! The Meaning of Race to Employers," in *The Urban Underclass*, eds. Christopher Jencks and Paul E. Peterson (Washington, DC: The Brookings Institution, 1991).

³⁹ See <https://implicit.harvard.edu/implicit/>

⁴⁰ See, e.g., Eric J. Vanman et al., *The Modern Face of Prejudice and Structural Features That Moderate the Effect of Cooperation on Affect*, 73 *J. Personality & Soc. Psychol.* 941, 944-45 (1977); Yolanda F. Niemann et al., *Intergroup Stereotypes of Working Class Blacks and Whites: Implications for Stereotype Threat*, 22 *Western J. Black Stud.* 103 (1988); John F. Dovidio et al., *Racial Stereotypes: The Contents of Their Cognitive Representations*, 22 *J. Experimental Social Psychology* 22 (1986); Mark Chen & John A. Bargh, *Nonconscious Behavioral Confirmation Processes: The Self-Fulfilling Consequences of Automatic Stereotype Activation*, 33 *J. Experimental Social Psychology* 541 (1997).

litigation because, to the extent that economic decisionmakers often harbor biased or unconscious racial stereotypes, it becomes more plausible that the subjective pricing process that Honda Finance has established for setting loan terms (in which a dealership can often plausibly deny that its treatment of a individual consumer was based on some attribute other than race) might mask what are in fact racially influenced decisions. In *Watson v. Fort Worth Bank & Trust*, 487 U.S. 977 (1988), the Supreme Court's recognition of the existence of subconscious stereotypes was cited as one of the reasons for approving the use of a disparate impact analysis to evaluate subjective decisionmaking processes at issue in that case. *Id.* at 990 ("Furthermore, even if one assumed that any such discrimination can be adequately policed through disparate treatment analysis, the problem of subconscious stereotypes and prejudices would remain.")

My own analysis of dealer vehicle pricing indicates that dealers harbor different beliefs about African-American and white willingness to bargain and their willingness to pay high markups.⁴¹ The same stereotyped perceptions that I have shown may have contributed to racial disparities in the pricing of vehicles may also contribute to racial disparities concerning finance charge markups.

1. *Evidence of Race-Contingent Vehicle Pricing*

There are a variety of different types of academic studies suggesting that automotive dealerships charge different prices for vehicles based on the race of the consumer. While none of

⁴¹ See Chapter 3 of IAN, AYRES, *PERVASIVE PREJUDICE?*; and Ian Ayres, *Further Evidence of Discrimination in New Car Negotiations and Estimates of Its Cause*, 94 MICHIGAN LAW REVIEW 109 (1995). See also "Confessions of a Car Salesman" www.edmunds.com/advice/buying/articles/42962/page004.html:

My manager had, at one point, described the different races and nationalities and what they were like as customers. It would be too inflammatory to repeat what he said here. But the gist of it was that the people of such-and-such nationality were "lie downs" (people who buy without negotiating), while the people of another race were "roaches" (they had bad credit), and people from that country were "mooches" (they tried to buy the car for invoice price).

these studies constitutes direct evidence that Honda dealerships in this case charged African-Americans higher finance charge markups because of their race, the evidence of pervasive race-contingent decisionmaking by industry participants with respect to other aspects of a purchase transaction lends support to the notion that dealerships engage in racially influenced decisionmaking with regard to imposing finance charge markups. Put simply, if dealerships charge African-Americans greater amounts than whites in the front end of the transaction (where the vehicle price is determined), it is more likely that they charge African-Americans more than whites in the back end of the transaction (where the finance terms are determined).

The most controlled evidence that African-Americans are charged more than whites by automobile dealers for a new vehicle price comes from audit tests I conducted of more than 200 dealerships in the Chicago area and have described in a series of publications.⁴² These studies found

⁴² In the audit tests (as with “fair housing” testing), a African-American and a white tester are sent to each dealership and bargain using a uniform script to test whether they are offered different prices. The audit was structured to control for a plethora of non-race factors, including tester age (all testers were twenty-four to twenty-eight years old); education (all testers had three or four years of college education); dress (all testers wore casual “yuppie” sportswear); transportation (all testers drove to the dealerships in similar used rental cars of the same model and year); economic class (all testers volunteered that they could finance the car themselves); occupation (if asked by a salesperson, each tester said that he or she was a young urban professional); address (if asked by the salesperson, each tester gave an address for an upper-class, Chicago neighborhood); attractiveness (all testers were subjectively selected for average attractiveness). The testers were trained for two days before visiting the dealerships. The testers were not told that the research was intended to test for race and gender discrimination. The testers did not even know that another tester would be negotiating at each of the dealerships. The testers were told only that the research was investigating how dealers negotiate. The training included not only memorizing the tester script but also participating in mock negotiations designed to help testers gain confidence and learn how to negotiate and answer questions uniformly. The training emphasized uniformity in cadence and inflection of tester response. In addition to spoken uniformity, the study sought to achieve tester uniformity in non-verbal behavior. The tester script was also designed to promote tester uniformity through silence. The testers volunteered very little information and were trained to feel comfortable with periods of silence. The script anticipated that the sellers would ask questions and gave the testers a long list of contingent responses to questions that might be asked. See IAN AYRES, *PERVASIVE PREJUDICE?: NON-TRADITIONAL EVIDENCE OF RACE AND GENDER DISCRIMINATION*

strong and pervasive evidence that dealerships engaged in racially influenced decisionmaking in the prices they offered consumers. The most controlled (and therefore authoritative) audit test found that dealerships asked African-American males and females to pay respectively \$1133 and \$465 more than similarly situated white males who used the same bargaining strategy.

I have also written extensively about what may have caused this pricing disparity -- the cause of the cause, if you will, of racially disparate pricing. The evidence, while more tentative, points to a number of partial explanations: (1) the “consequential” animus of dealers -- dealers behave as if they gain more utility from extracting an extra dollar from African-Americans than from white customers; (2) dealer perception that African-Americans are more likely to consent to “home run” profits; and (3) dealership perception that African-Americans have higher costs of bargaining.⁴³

A book of mine also includes a meta analysis of four different studies of racial disparities in vehicle pricing -- including two new studies of consummated transactions.⁴⁴ The racial disparities produced by the four different studies consistently point in the same direction (see Table 1, *infra* Exh. 4). The overall lesson of this meta analysis is that both the audit and non-audit (consummated transaction) studies have produced consistent evidence that African-American men and women are asked to pay hundreds of dollars more than their white male and female counterparts and that these differentials, in aggregate and for all but one of the individual studies, are statistically significant.

(University of Chicago Press) (2002); & Ian Ayres, *Further Evidence of Discrimination in New Car Negotiations and Estimates of Its Cause*, 94 MICHIGAN LAW REVIEW 109 (1995).

⁴³ See Chapter 3 of IAN, AYRES, *PERVASIVE PREJUDICE?*; and Ian Ayres, *Further Evidence of Discrimination in New Car Negotiations and Estimates of Its Cause*, 94 MICHIGAN LAW REVIEW 109 (1995).

⁴⁴ In the audit tests, the testers solicited offers from dealerships, but did not actually purchase cars. In contrast, the studies of consummated transactions tested for racially disparate pricing in actual sales.

Since the publication of my *PERVASIVE PREJUDICE?* book, there has been further collaboration of this evidence. Fiona Scott Morton, Florian Zettlemeyer and Jorge Silva-Risso (SZS) – using J.D. Powers data – analyzed data on 671,468 consummated car purchases at 3,562 dealerships concerning purchases made between January 1, 1999 and February 28, 2000.⁴⁵ They found that black purchasers are expected to pay approximately \$456 more than white purchasers,⁴⁶ and this result is statistically significant.⁴⁷

The SZS study is also important because it tested whether purchasers who used *Autobytel*, the largest Internet referral service at the time received systematically different deals. In particular, they tested whether there were fewer racial disparities because the service may have negotiated better terms with the dealership and because the dealership may have had a weaker racial signal than in face-to-face transactions.⁴⁸

Their results are striking. They found that *Autobytel* users paid approximately \$273 less (1.2%) than non-*Autobytel* users.⁴⁹ Moreover, they found a marked decline in racial disparities –

⁴⁵ See Fiona Scott Morton, Florian Zettlemeyer & Jorge Silva-Risso, *Consumer Information and Discrimination: Does the Internet Affect the Pricing of New Cars to Women and Minorities?*, 1 *Quantitative Marketing and Economics* 65 (2003). SZS did not observe the gender or race of the bargainers. They inferred the gender of the titled purchaser by making probabilistic inferences about the purchaser's first name, and they made inferences about the purchaser's race by exploiting census data about the racial composition of the "block group" (on average 1100 people) where the purchaser resided.

⁴⁶Literally a purchaser from an all black block group is predicted to pay \$456 more than a purchaser from an all white block group.

⁴⁷See SZS, at 27 (Table 5, col. 1).

⁴⁸The race of purchasers in *Autobytel* transactions might still be inferred by residence and at times by telephonic inferences. Also *Autobytel* may not be able to protect purchasers from racial disparities in negotiating the price of a trade-in that must be done on a face-to-face basis.

⁴⁹*Id.* at 28 (Table 6, col. 1).

with African American users paying only \$68 more than white users (compared to \$456 differential found in traditional sales).⁵⁰ SZS shows once again that in traditional new car negotiations African Americans can be expected to pay hundreds of dollars more than whites. And the Autobytel result is also quite pertinent to this case because it suggests – as did Part IV – that reducing dealerships’ pricing discretion will tend to reduce racial pricing disparities.

The finding of these studies, that dealerships charge African-Americans more for the price of the car, make it more plausible that they charge African-Americans more in finance charge markups. The same perceptions that lead dealerships to charge African-Americans more for the price of the vehicle are likely to lead them to charge African-Americans more in finance charge markups.

A book of mine also includes a detailed analysis of about 1000 consummated sales at a single Atlanta dealership (Sutherlin Mazda) which is especially relevant to the subject at hand because the data separately reports vehicle profit and finance profit. Table 2 (reported *infra* in Exh. 5) indicates -- using regressions testing for racial differences – that the disparate total profits stem from disparities in *both* vehicle and financing profits. For example, the dealership vehicle profits from African-American females are \$505 higher than their profits from white male purchasers, and the dealerships’ financing profits (from those 500 some-odd people who financed) are \$589 higher for African-American females relative to white male purchasers. Again, these results are highly significant.⁵¹ Other regressions in the book controlled for a host of other factors and still found that African-Americans paid systematically higher finance profits than white males. Moreover, the data

⁵⁰*Id.*

⁵¹ Note that the total profit coefficients are not merely the sum of the vehicle and financing profit coefficients, because not all purchasers use dealership-arranged financing.

also indicate a positive correlation between the vehicle and financial profits – suggesting that dealers who charge customers more for the vehicle price also charge a higher markup on the loan.

2. *Evidence of Race-Contingent Decisionmaking in Other Contexts*

While less probative of racially influenced decisionmaking by the dealerships, there are dozens of empirical studies providing evidence of racially influenced decisionmaking in other lending markets. Of particular relevance is a recent study of the Urban Institute.⁵² The Urban Institute findings were based in part on paired audit testing conducted by the National Fair Housing Alliance that was carried out by people of different racial and ethnic backgrounds in a sample of seven cities. Each group of testers - including one white and one or more minorities - told lenders they had similar credit histories, incomes and financial histories, and had the same type of mortgage needs. The testing found that overall, minorities were less likely to receive information about loan products, and received less time and information from loan officers. Most importantly for our purposes, this audit study found that *minorities “were quoted higher interest rates in most of the cities where tests were conducted.”*⁵³ These findings of race-contingent decisionmaking in audit

⁵² Turner, Margery Austin, and Felicity Skidmore, the Urban Institute, *Mortgage Lending Discrimination: A Review of Existing Evidence*, September 1999.

⁵³ *Id.* at 8. *But see also id.* at 36-37 (interest rate offered African-Americans statistically greater than those offered whites only in Atlanta tests). The report also found:

One early analytic study found discrimination against Blacks and Hispanics in interest rates and loan fees but not in loan maturities. Another also found discrimination against Blacks in the setting of interest rates. Both studies used extensive statistical controls to isolate the effect of race and ethnicity from the effects of other factors. Two more recent studies examine discrimination in *overages*, defined as the excess of the final contractual interest rate over the lender’s official rate when it first commits to a loan. Both of these studies find cases in which the overages charged to Black and Hispanic borrowers are higher than those charged white customers by a small but statistically significant amount.

Id. at 19.

studies of offered interest rates by lenders in other markets makes it more plausible that race influenced decisionmaking could happen in car lending. Indeed, the likelihood that discretionary systems will be “influenced by bias” is an important reason why defendant (and the industry) instituted objective credit scoring of applicants.⁵⁴

There is also evidence of race-contingent decisionmaking in a variety of other consumer markets.⁵⁵ The evidence in these studies are, of course, of much more attenuated relevance to the issues which are controverted in this litigation. However, even these studies of different markets are relevant to showing that (i) market competition does not necessarily drive out discrimination from consumer markets and (ii) racially influenced decisionmaking is particularly likely to arise in situations where sellers have unchecked authority and where a consumer has difficulty comparing the prices that others are charged. Racially influenced decisionmaking is not just something that occurs with regard to employment or housing.

B. Dealership Inferences About Borrowers' Willingness to Pay Supra-Competitive Prices

Finally, it is possible that dealerships exercise their authority in ways that are not influenced by racial stereotypes but which nonetheless give rise to disparate racial impacts. Evidence from both my audit testing of vehicle price negotiations and the depositions of Honda dealers suggest that it is particularly likely that dealerships offer high markups to buyers whom they perceive are willing

⁵⁴ “[An alternative to objective credit scoring] would be purely judgmental [decisionmaking]. And judgmental is an antiquated way of doing it. I don't know of any large lenders that are making purely judgmental decisions. And when it's judgmental, then there is . . . more apt to be influenced by bias.” See Deposition of Christopher A. O'Bannion in Cason v. NMAC, at 55-56.

⁵⁵ The two leading review articles are by Peter Siegelman, Race Discrimination in “Everyday” Commercial Transactions: What Do We Know, What Do We Need to Know, and How Can We Find Out, in *A National Report Card on Discrimination in America: The Role of Testing* (Michael Fix & Margery Austin Turner, eds. 1999); John Yinger, Evidence of Discrimination in Consumer Markets, 12 *J. Econ Perspectives* 23 (1998).

to pay supra-competitive prices. My audit testing of new car dealerships suggests that a substantial part of dealership behavior is an effort to infer which consumers are willing to pay a high price and then to charge them that “home run” amount. My studies suggest that the dealerships’ pricing system was driven by an effort to make revenue-based inference. Indeed, dealers have their own term for making just this type of inference, which they call “qualifying the buyer.” “Qualifying” is the process of a dealer inferring how much the buyer is willing and/or able to pay on the basis of the buyer’s observable characteristics and/or the buyer’s answers to a dealer’s questions (e.g., “Have you visited other dealerships?”).⁵⁶ This same qualifying process is likely to be at play in the back rooms of the dealership where the terms of financing are determined.⁵⁷

Dealers’ attention to the possibility of obtaining a supra-competitive price is particularly plausible because dealers make a large proportion of both their finance and vehicle profits from a relatively small and concentrated set of consumers. Dealers who make sixty five percent of their markup profit from ten percent of their sales have substantial incentives not to overlook the possibility of a “home run” markup.⁵⁸

Thus, if dealers perceive that consumers with less education are more likely on average to pay a supra-competitive markup, it might be rational to offer higher finance charge markups to all consumers who are perceived by dealers to be less educated. Indeed, this foregoing concentration of finance profits from a few borrowers means that dealers have an incentive to offer higher markups

⁵⁶ See Kurt A. Weiss, *Have I Got A Deal For You!* (1997).

⁵⁷ The plausibility of this causal explanation is also supported by a Honda dealer’s own deposition testimony. See Deposition of Richard H. Houchins, 37:15-38:20.

⁵⁸ In the data analyzed by Dr. Cohen, 10% of Honda Finance borrowers produced 65.3% of the finance charge markups. Cohen Report, Table 6.

to uneducated borrowers even if the average uneducated borrower has a lower willingness to pay a high markup. When profits are concentrated, dealers will tend to focus not on the *average* willingness of consumers to pay, but on the probability that a subset of particular consumer types will allow the dealer to hit a markup home-run.

The lure of receiving a virtually immediate cash reward for arranging and processing a low marginal cost transaction gives dealerships a strong incentive to troll for high markup borrowers. This trolling for high-markup buyers is likely to disproportionately burden African-American borrowers. Not only did the audit studies indicate that dealerships are likely to infer that African-Americans are more willing to pay higher markups, but dealer perceptions about non-race attributes (such as access to competitive offers) might lead dealerships to impose higher markups on a class of consumers that are disproportionately African-American.⁵⁹ Dealership profit maximization inclines the decisionmaking toward revenue-based inferences (as opposed to cost-based inferences) in setting the markup charge and it is my opinion that such inferences likely play a contributory role to the overall racial disparity in finance charge markups.

CONCLUSION

This report has advanced a theory of what does and does not qualify as a business justification under the facts of this case. In essence, it is my opinion that for an attribute to constitute a business justification, the attribute must relate to the expected marginal costs that a borrower is expected to impose on a dealership in arranging and/or processing a loan.

Determining what factors plausibly constitute “legitimate business needs” is important in

⁵⁹See Ian Ayres, *Further Evidence of Discrimination in New Car Negotiations and Estimates of Its Cause*, 94 MICHIGAN LAW REVIEW 109 (1995).

assessing whether or not common questions of fact predominate. In conducting regression tests of unjustified disparate impacts, it is appropriate to include *only* those variables that offer a plausible business justification for differential finance charge markups. In fact, it is my opinion that it is necessary to purposefully exclude from such regressions any factors that don't plausibly constitute a legitimate business need. Accordingly, pinning down a list of plausible factors defines the universe of necessary information for disparate impact analysis. Factors that are not available for inclusion into centralized databases are less amenable to the kind of aggregate statistical analysis that is standard in testing for disparate racial impacts. But it is my opinion that these factors should not be controlled for in statistical analysis and hence data on these factors do not need to be collected.

The report has applied this theory to describe what variables are appropriate to include and exclude from regressions testing for unjustified disparate impacts. I have found that the existing databases are more than adequate to control for all factors that plausibly constitute a legitimate business need. Honda Finance's "credit scoring system" embodied by its centralized electronic databases contains an abundance of information about the creditworthiness of individual borrowers (even though it is my opinion that it is inappropriate to control for creditworthiness factors because they have already been accounted for in the buy rate and because they are not related to dealer's cost of arranging loans). And it has been my opinion that it is inappropriate to control for factors that may facilitate a dealership's ability to extract supra-competitive revenues from borrowers – not because these factors have not affected the ultimate markup – but because they do not plausibly constitute a legitimate business need.

QUALIFICATIONS

I am the William K. Townsend Professor at Yale Law School and a Professor at the Yale School of Management.

I received a bachelor of arts degree in economics and Russian studies from Yale University in 1981. In 1986, I received a J.D. degree from Yale Law School and in 1988 I received a Ph.D. in economics from the Massachusetts Institute of Technology. In economics graduate school, my major fields were econometrics and industrial organization.

Since graduate school, I have taught at Northwestern (1987-90), Virginia (1990-91) and Stanford (1992-94) law schools before coming to Yale as a tenured and chaired professor in 1994. From 1987 to 1991, I was also a research fellow of the American Bar Foundation and from 1997 to 1998 I was a visiting professor at University of Illinois.

I am an economist and a lawyer. My scholarship has focused on contracts and civil rights -- with a particular emphasis on empirical analysis of legal issues. As shown in Exhibit 1, I have published more than 100 pieces, including dozens of articles in law reviews and peer-reviewed economic journals, four books and a handful of shorter pieces in more popular publications such as the *New York Times*, *Forbes* and *Marketplace* Public Radio. I am the editor of the *Journal of Law, Economics and Organization*.

In 1991, I published the first of a series of articles documenting race and gender discrimination in new car sales.⁶⁰ I have also published several articles testing for discrimination in

⁶⁰ Ian Ayres, *Fair Driving: Gender and Race Discrimination in Retail Car Negotiations*, 104 HARVARD LAW REVIEW 817 (1991). See also *Race and Gender Discrimination in Negotiation For the Purchase of a New Car*, 84 AMERICAN ECONOMIC REVIEW 304 (1995) (with Peter Siegelman); *Further Evidence of Discrimination in New Car Negotiations and Estimates of Its Cause*, 94 MICHIGAN LAW REVIEW 109 (1995).

other contexts,⁶¹ as well as, authored or coauthored more than a dozen contract pieces⁶² -- including a leading casebook in contract law⁶³ and one of the most cited contract articles of the last twenty

⁶¹ IAN AYRES, *PERVASIVE PREJUDICE?: NON-TRADITIONAL EVIDENCE OF RACE AND GENDER DISCRIMINATION* (University of Chicago Press) (2002); Ian Ayres & Peter Cramton, *Pursuing Deficit Reduction Through Diversity: How Affirmative Action at the FCC Increased Auction Competition*, 48 *STANFORD LAW REVIEW* 761 (1996); Ian Ayres & Peter Cramton, *Aid Diversity, and the Treasury*, *NEW YORK TIMES* F13 (May 21, 1995); Ian Ayres, Robert Gaston & Mark Deierhoi, *HLA Matching in Renal Transplantation*, 332 *THE NEW ENGLAND JOURNAL OF MEDICINE* 752 (1995); Ian Ayres & Joel Waldfogel, *A Market Test for Race Discrimination in Bail Setting*, 46 *STANFORD LAW REVIEW* 987 (1994); Ian Ayres, Robert Gaston, Laura Dooley and Arnold Diethelm, *Racial Equity in Renal Transplantation: The Disparate Impact of HLA-Based Allocation*, 270 *JOURNAL OF AMERICAN MEDICAL ASSOCIATION* 1352 (1993) *Response to letters-to-the-editors*, 271 *JOURNAL OF AMERICAN MEDICAL ASSOCIATION* 269 (1994); Ian Ayres, Laura Dooley & Robert Gaston, *Unequal Racial Access to Kidney Transplantation*, 46 *VANDERBILT LAW REVIEW* 805 (1993).

⁶² *Three Proposals To Harness Private Information in Contract*, *HARVARD JOURNAL OF LAW AND PUBLIC POLICY* (1998); *Default Rules for Incomplete Contracts*, *NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW* (1998); *Empire or Residue: Competing Visions of the Contractual Canon*, in *LEGAL CANONS* (J.M. Balkin and S. Levinson, eds.) (1997); *Common Knowledge As A Barrier to Negotiation*, 44 *UCLA LAW REVIEW* 1631 (1997) (with Barry Nalebuff); *Distinguishing Between Consensual and Nonconsensual Advantage of Liability Rules*, 105 *YALE LAW JOURNAL* 235 (1995) (with Eric Talley); Review, *The Limits of Freedom of Contract*, by Michael J. Trebilcock, 33 *JOURNAL OF ECONOMIC LITERATURE* 865 (1995); *Solomonic Bargaining: Dividing A Legal Entitlement To Facilitate Coasean Trade*, 104 *YALE LAW JOURNAL* 1027 (1995) (with Eric Talley); *Preliminary Thoughts on Optimal Tailoring of Contractual Rules*, 3 *SOUTHERN CALIFORNIA INTERDISCIPLINARY LAW JOURNAL* 1 (1993); *Economic Rationales For Mediation*, 80 *VIRGINIA LAW REVIEW* 323 (1994) (with Jennifer Brown); *Mutual and Unilateral Mistake in Contract Law*, 22 *JOURNAL OF LEGAL STUDIES* 309 (1993) (with Eric Rasmusen); *Making a Difference: The Contractual Contributions of Easterbrook and Fischel*, 59 *UNIVERSITY OF CHICAGO LAW REVIEW* 1391 (1992), reprinted in 35 *Corporate Practice Commentator* 65 (1993); *Strategic Contractual Inefficiency and the Optimal Choice of Legal Rules*, 101 *YALE LAW JOURNAL* 729 (1992) (with Rob Gertner); *The Possibility of Inefficient Corporate Contracts*, 60 *CINCINNATI LAW REVIEW* 387 (1991); *Optimal Pooling in Claims Resolution Facilities*, 53 *LAW AND CONTEMPORARY PROBLEMS* 159 (1990); *"I'll Sell It To You at Cost:" Legal Methods to Promote Retail Markup Disclosure*, 84 *NORTHWESTERN LAW REVIEW* 1047 (1990) (with F. Clayton Miller); *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 *YALE LAW JOURNAL* 87 (1989) (with Robert Gertner).

⁶³ *STUDIES IN CONTRACT LAW* (5th edition, Foundation Press, 1997; 6th edition, 2003) (with Edward J. Murphy & Richard E. Speidel).

years.⁶⁴

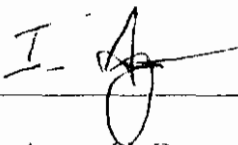
I have previously testified as an expert witness in a variety of antitrust, contract, civil rights and corporation cases. I have attached a list of cases on which I have given sworn testimony (Exh. 2).

I have attached (as Exh. 3) a list of documents that I have considered for my work on this case and to which I may refer during deposition or at trial.

⁶⁴ *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE LAW JOURNAL 87 (1989) (with Robert Gertner).

Affirmation

I affirm that I have written the Statement above and that I believe it to be correct in all respects.



Ian Ayres, Ph.D.

Exhibit 1

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EDUCATION

- Ph.D. (Economics) Massachusetts Institute of Technology, 1988.
Major Fields: Industrial Organization, Econometrics.
Dissertation: Essays on Vertical Foreclosure, Cartel Stability and the Structural Determinants of Oligopolistic Behavior.
- J.D. Yale Law School, 1986.
Articles Editor, Yale Law Journal.
- B.A. Yale University, 1981.
Majors: Russian and East European Studies (Distinction).
Economics (Distinction).
Summa Cum Laude, 1981.
Phi Beta Kappa, 1980.

PROFESSIONAL APPOINTMENTS

- William K. Townsend Professor, Yale Law School, 1994 - present.
- Professor, Yale School of Management, 1994 - present.
- Editor, JOURNAL OF LAW, ECONOMICS AND ORGANIZATION, 2002 - present.
- Visiting Professor, University of Illinois, School of Law, 1997-98.
- Lecturer, University of Toronto, Faculty of Law, January 1995.
- Professor, Stanford Law School, 1992 - 1994.
- Lecturer, University of Illinois, School of Law, Summers 1994 and 1995.
- Board of Editors, SUPREME COURT ECONOMIC REVIEW, 1993 - .
- Lecturer, University of Iowa, School of Law, January Term 1993.

Lecturer, Moscow State Institute of International Relations (MGIMO) -- Cardozo Law Institute, Summer 1992.

Visiting Professor, Yale Law School, Fall 1991.

Visiting Professor, University of Virginia, School of Law, Fall 1990 - Spring 1991.

Guest Scholar, Brookings Institution, Summer 1990 - Spring 1991.

Associate Professor, Northwestern University, School of Law, 1990 - 1991; (Assistant Professor, 1987-1990).

Research Fellow, American Bar Foundation, 1987 - 1991.

Scholar in Residence, Sonnenschein Nath and Rosenthal - Summer 1990.

Associate Editor, *Law and Social Inquiry*, 1990.

Clerk to the Honorable James K. Logan, Tenth Circuit Court of Appeals, 1986-1987.

Olin Summer Research Fellow, Yale Law School Program in Law, Economics, and Public Policy, May to August 1986.

COURSES TAUGHT

Antitrust, Civil Rights, Commercial Law, Contracts, Corporations, Corporate Finance, Law and Economics, Property, Quantitative Methods.

PUBLIC INTEREST

Rothe Dev. Corp. v. United States, SA-98-CA-1011-EP, U.S. District Court Western District of Texas, testifying expert concerning narrow tailoring of affirmative action in government procurement, 1999.

Advisor, Justice and Commerce Departments on post-Adarand review of Affirmative Action, 1998.

Member, Board of Directors, Yale Law School Early Learning Center, 1996 - 1997 .

Member, Board of Directors, East Palo Alto Community Law Project, 1993 - 1994.

In re Insurance Antitrust Litigation, consulting expert; regarding antitrust claims of 17 state Attorneys General against major commercial insurers, 1988 - 1991.

Counsel in Illinois post-conviction petition, *People v. Titone*, 83-C-127, 1988 to 1992 (Death

sentence vacated September 7, 1990; argued claims concerning underlying conviction to Illinois Supreme Court, March 14, 1992).

New Haven Battered Women's Temporary Restraining Order Project,
September 1985 to April 1986.

Harvard Prison Legal Assistance Project, October 1983 to May 1984.

Legal Services of Western Missouri, June to August 1983.

Jerome Frank Legal Services Organization, January 1983 to October 1984.

PUBLICATIONS

Public Radio Commentary for MARKETPLACE (with Barry Nalebuff):

Getting Iraq to Undermine OPEC (April 6, 2004)
Benefits of Non-Transparency (Feb. 23, 2004)
Who's Right? (Nov. 10, 2003)
Blackboxes For Cars (Sept. 16, 2003)
Sarbanes/Oxley's First Birthday (July 30, 2003)
Pay Per Mile Auto Insurance (Feb. 25, 2003)
Spoiling Spam (Dec. 24, 2002)
Virtual Strikes (Oct. 4, 2002)
Disclosing Hidden Fees to Consumers (Aug. 28, 2002)
An Alternative to Expensing Stock Options (July 24, 2002)

Why Not? Bi-Monthly Column in FORBES (with Barry Nalebuff):

Dialing for Thieves 76 (April 19, 2004)
Don't Sell Us Short 57 (Feb. 2, 2004)
It Beats a CD 160 (Dec. 8, 2003)
Blackbox for Cars 83 (August 11, 2003)
An Educated Consumer 95 (June 09, 2003)
Make Car Insurance Fairer 154 (March 17, 2003)
The Virtues of a Virtual Strike 128 (Oct. 25, 2002)
Price-Protect Your Home 101 (Sept 16, 2002)
Opt-Out Advertising 164 (June 20, 2002)
A Community of Ideas 173 (May 9, 2002)
If Telemarketers Paid For Your Time 225 (April 15, 2002)

Promissory Fraud Without Breach, WISCONSIN LAW REVIEW (forthcoming 2004) (with Gregory Klass).

STRAIGHTFORWARD: MOBILIZING HETEROSEXUAL SUPPORT FOR GAY RIGHTS (forthcoming PRINCETON UNIVERSITY PRESS 2005) (with Jennifer Gerarda Brown).

INSINCERE PROMISES: THE LAW OF MISREPRESENTED INTENT (forthcoming YALE UNIVERSITY PRESS, 2005) (with Gregory Klass).

Three Tests for Measuring Unjustified Disparate Impacts in Organ Transplantation: The Problem of "Included Variable" Bias, (forthcoming PERSPECTIVES IN BIOLOGY AND MEDICINE).

OPTIONAL LAW: REAL OPTIONS IN THE STRUCTURE OF LEGAL ENTITLEMENTS (forthcoming UNIVERSITY OF CHICAGO PRESS, 2005).

The Wrong Ticket to Ride, NEW YORK TIMES A29 (March 24, 2004) (with Barry Nalebuff).

Principled Problem Solving: Letting Constraints Filter and Guide Your Thinking Can Often Be the Best Way to Reach Truly Creative Solutions, 14 SCIENTIFIC AMERICAN MIND 96 (2004) (with Barry Nalebuff).

System Down: McCain-Feingold Helped Doom the Current Model of Public Financing for Campaigns. Fixing it will Take Some Imagination, THE AMERICAN PROSPECT ON LINE (Dec. 12, 2003) (with Bruce Ackerman) available at www.prospect.org.

Why Legislating Low Tuitions for State Colleges Is a Mistake: They Just Subsidize the Rich, WRIT FINDLAW'S LEGAL COMMENTARY (October 30, 2003) (with Aaron Edlin) http://writ.news.findlaw.com/commentary/20031030_ayres.html.

In Praise of Honest Pricing, 45 MIT SLOAN MANAGEMENT REVIEW 24 (Fall 2003) (with Barry Nalebuff).

Want to Call Me? Pay Me!, WALL STREET JOURNAL A24 (Oct. 8, 2003) (with Barry Nalebuff).

Making Ideas Take Flight, BUSINESS 2.0 133 (Oct. 2003) (with Barry Nalebuff).

Dialing for Dollars, NEW YORK TIMES A29 (Sept. 30, 2003).

WHY NOT?: HOW TO USE EVERYDAY INGENUITY TO SOLVE PROBLEMS BIG AND SMALL (Harvard Business School Press, 2003) (with Barry Nalebuff) *also published in Portuguese as "Você Pode Tudo"* (Negocio Editora).

Book Excerpt: Ideas Waiting to Happen, FORBES 127 (Oct. 27 2003) (with Barry Nalebuff).

Book Excerpt: A Role on the Board for the 'Loyal Opposition,' DIRECTORS & BOARDS 32 (Fall 2003).

Book Excerpt: Problem Solving: What Would Croesus Do?, DARWIN (Nov. 2003).

To Insure Prejudice: Racial Disparities in Taxicab Tipping, (working paper 2003) (with Fred Vars and Nasser Zakariya).

Exactly Who's in the Right in this Labor Dispute? YALE DAILY NEWS 2 (Sept. 4, 2003) (with Barry Nalebuff).

The Brennan Center Jorde Symposium Issue on BRUCE ACKERMAN & IAN AYRES, VOTING WITH DOLLARS: A NEW PARADIGM FOR CAMPAIGN FINANCE REFORM, 91 CALIFORNIA LAW REVIEW 641 (2003) and *The New Paradigm Revisited*, 91 CALIFORNIA LAW REVIEW 743 (2003) (with Bruce Ackerman).

STUDIES IN CONTRACT LAW (6th edition, Foundation Press, 2003) (with Edward J. Murphy & Richard E. Speidel).

Patriot Dollars Put Money Where the Voters Are, L.A. TIMES at 15 (July 17, 2003) (with Bruce Ackerman).

Symposium Issue on IAN AYRES, PERVASIVE PREJUDICE?: UNCONVENTIONAL EVIDENCE OF RACE AND GENDER DISCRIMINATION (2002), 55 STANFORD LAW REVIEW 2267 (2003) and *Is Discrimination Elusive?*, 55 STANFORD LAW REVIEW 2419 (2003)

Symposium Issue Commentaries on BRUCE ACKERMAN & IAN AYRES, VOTING WITH DOLLARS: A NEW PARADIGM FOR CAMPAIGN FINANCE REFORM, 37 UNIVERSITY OF RICHMOND LAW REVIEW 935 (2003) and *Why a New Paradigm?*, 37 UNIVERSITY OF RICHMOND LAW REVIEW 1147 (2003) (with Bruce Ackerman).

Charity Begins At Schedule A, NEW YORK TIMES, p. A21, col. 1 (April 15, 2003) (with Barry Nalebuff).

Valuing Modern Contract Scholarship, 112 YALE LAW JOURNAL 881 (2003).

Shooting Down the More Guns, Less Crime Hypothesis, 55 STANFORD LAW REVIEW 1193 (2003) (with John J. Donohue III).

The Latest Misfires in Support of the More Guns, Less Crime Hypothesis, 55 STANFORD LAW REVIEW 1371 (2003) (with John J. Donohue III).

Marketing Privacy, 20 YALE JOURNAL ON REGULATION 77 (2003) (with Matthew Funk).

Correlated Values in the Theory of Property and Liability Rules, 32 JOURNAL OF LEGAL STUDIES 121 (2003) (with Paul Goldbart).

Campaign Reform's Worst Enemy, NEW YORK TIMES, p. A19, col. 2 (July 6, 2002) (with Bruce Ackerman).

Outcome Tests of Racial Disparities in Police Practices, 4 JOURNAL OF THE JUSTICE RESEARCH & STATICS ASSOCIATION 131 (2002).

Internalizing Outsider Trading, 101 MICHIGAN LAW REVIEW 313 (2002) (with Stephen Choi).

VOTING WITH DOLLARS: A NEW PARADIGM FOR CAMPAIGN FINANCE (with Bruce Ackerman) (Yale University Press) (2002).

A Viable Alternative to Breaking up Microsoft: Compulsory Licensing That Would Make Microsoft Compete With Its Past Self, WRIT FINDLAW'S LEGAL COMMENTARY (April 10, 2002) (with Aaron Edlin) http://writ.news.findlaw.com/commentary/20020410_edlin.html

Optimal Delegation and Decoupling in the Design of Liability Rules, 100 MICHIGAN LAW REVIEW 1 (2001) (with Paul Goldbart).

PERVASIVE PREJUDICE?: NON-TRADITIONAL EVIDENCE OF RACE AND GENDER DISCRIMINATION (University of Chicago Press, 2002).

A Dilution Mechanism for Valuing Corporations in Bankruptcy, 111 YALE LAW JOURNAL 83 (2001) (with Barry E. Adler).

Substitutes for Insider Trading, 54 STANFORD LAW REVIEW 235 (2001) (with Joe Bankman).

Connecticut's Speeder-Friendly Crackdown, NEW YORK TIMES, p. A19, col. 2 (August 31, 2001) (with Barry Nalebuff).

Should Campaign Donors Be Identified?, 24 REGULATION 12 (Summer 2001), *excerpted as A Real Solution: Make Donors Anonymous*, NATIONAL REVIEW ONLINE (July 12, 2001) <http://www.nationalreview.com/comment/comment-ayres071201.shtml>.

Using Public Affirmative Action to Remedy Private Discrimination (with Frederick E. Vars) Chapter 2 in NYU WORKING PAPERS ON LABOR AND EMPLOYMENT LAW: 1998-1999 35 (2001).

Why Telemarketers Should Pay Us, HARTFORD COURANT, p. A15, col. 3 (May 10, 2001) (with Matthew Funk).

Lectures vs. Laptops, NEW YORK TIMES, p. A25, col. 2 (March 20, 2001).

Monetize Labor Practices, 26 BOSTON REVIEW 18 (February-March 2001) (available at <http://bostonreview.mit.edu/BR26.1/ayres.html>), *reprinted in* Archon Fung, Dara O'Rourke, & Charles Sabel, CAN WE PUT AN END TO SWEATSHOPS 80 (Beacon Press 2001)

2000 MONSANTO LECTURE IN TORT REFORM AND JURISPRUDENCE: *Using Tort Settlement To Cartelize*, 34 VALPARAISO UNIVERSITY LAW REVIEW 595 (2000).

Disclosure versus Anonymity In Campaign Finance, in DESIGNING DEMOCRATIC INSTITUTIONS, XLII NOMOS 19 (Ian Shapiro & Stephen Macedo, eds.2000).

Economics of Affirmative Action, in 2 ENCYCLOPEDIA OF THE AMERICAN CONSTITUTION 848 (Leonard W. Levy & Kenneth L. Karst, eds., 2d ed. 2000)

Empire or Residue: Competing Visions of the Contractual Canon, in LEGAL CANONS 47 (J.M. Balkin and S. Levinson, eds.) (2000).

Threatening Inefficient Performance, 44 EUROPEAN ECONOMIC REVIEW 818 (2000) (with Kristin Madison).

Determinants of Citations to Articles in Elite Law Review, 29 JOURNAL OF LEGAL STUDIES 427 (2000) (with Fredrick E. Vars).

Taking Issue With Issue Advocacy, 85 VIRGINIA LAW REVIEW 1793 (1999).

Nondiscretionary Concealed Weapons Laws: A Case Study of Statistics, Standards of Proff and Public Policy, 1 AMERICAN LAW AND ECONOMICS REVIEW 436 (1999) (with John J. Donohue III).

Threatening Inefficient Performance of Injunctions and Contracts, 148 UNIVERSITY OF PENNSYLVANIA LAW REVIEW 45 (1999) (with Kristin Madison).

The Employment Contract, 8 KANSAS JOURNAL OF LAW AND PUBLIC POLICY 71 (1999) (with Stewart Schwab).

Why Prosecute Linda Tripp?, NEW YORK TIMES P. A17, col. 1 (August 10, 1999).

Comment [on "The Tobacco Deal" by Jeremy Bulow & Paul Klemperer], in BROOKINGS PAPERS ON ECONOMIC ACTIVITY: MICROECONOMICS 395 (1998).

Eroding Entitlements as Litigation Commitment, 66 UNIVERSITY OF CHICAGO LAW REVIEW 836 (1999).

Majoritarian v. Minoritarian Defaults, 51 STANFORD LAW REVIEW 1591 (1999) (with Robert Gertner).

1998 LADD LECTURE: *Empire or Residue: Competing Visions of the Contractual Canon*, 26 FLORIDA STATE LAW REVIEW 897 (1999).

Discrediting the Free Market, 66 UNIVERSITY OF CHICAGO LAW REVIEW 273 (1999).

Limiting Patentees' Market Power Without Reducing Innovation Incentives: The Perverse Benefits of Uncertainty and Non-Injunctive Remedies, 97 MICHIGAN LAW REVIEW 985 (1999)

(with Paul Klemperer).

When Does Private Discrimination Justify Public Affirmative Action? 1998 COLUMBIA LAW REVIEW 1577 (1998) (with Fredrick E. Vars).

1998 MONSANTO LECTURE IN TORT REFORM AND JURISPRUDENCE: *Protecting Property With Puts*, 32 VALPARAISO UNIVERSITY LAW REVIEW 793 (1998).

"Pro-competitive Executive Compensation" as a Condition for Approval of Mergers that Simultaneously Exploit Consumers and Enhance Efficiency, 19 CANADIAN COMPETITION RECORD 18 (Spring 1998) (with Stephen F. Ross).

The Donation Booth: Mandating Donor Anonymity to Disrupt the Market for Political Influence, 50 STANFORD LAW REVIEW 837 (1998) (with Jeremy Bulow) republished as *La Donacion Secreta: Evitar que los candidatos sepan quienes son sus donantes permite desaticular el trafico de influencias*, 83 ESTUDIOS PUBLICOS 67 (2001).

Measuring the Positive Externalities from Unobservable Victim Precaution: An Empirical Analysis of Lojack, 113 QUARTERLY JOURNAL OF ECONOMICS 43 (1998) (with Steven D. Levitt).

Default Rules for Incomplete Contracts, THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW, Vol. A-D 585 (Peter Newman, ed., 1998).

Remedying Private Discrimination: Following the 'Anderson' Model, LOS ANGELES TIMES M2, col. 3 (April 26, 1998).

Three Proposals To Harness Private Information in Contract, 21 HARVARD JOURNAL OF LAW AND PUBLIC POLICY 135 (1997).

The Twin Faces of Judicial Corruption: Extortion and Bribery, 74 DENVER UNIVERSITY LAW REVIEW 1231 (1997).

The Donation Booth, 22 BOSTON REVIEW 26 (December-January 1997-98) (with Jeremy Bulow) (available at <http://bostonreview.mit.edu/BR22.6/ayres.html>), reprinted in 47 YALE LAW REPORT 62 (2000) and THE NEWS-GAZETTE, B1 (Sept. 27, 1998).

Breaking Windows: Why the Justice Department Should Go After the Microsoft Monopoly, THE NEW REPUBLIC 18 (Nov. 17, 1997).

Never Confuse Efficiency With A Liver Complaint, 1997 WISCONSIN LAW REVIEW 503 (1997).

Common Knowledge As A Barrier to Negotiation, 44 UCLA LAW REVIEW 1631 (1997) (with Barry Nalebuff).

STUDIES IN CONTRACT LAW (5th edition, Foundation Press, 1997) (with Edward J. Murphy & Richard E. Speidel).

Car Buying, Made Simpler, NEW YORK TIMES F12 (April 13, 1997) (with Peter Schuck).

Legal Entitlements as Auctions: Property Rules, Liability Rules, and Beyond, 106 YALE LAW JOURNAL 703 (1997) (with Jack Balkin).

Narrow Tailoring, 43 UCLA LAW REVIEW 1781 (1996).

Pushing the Envelope: Antitrust Implications of the Envelope Theorem, 17 MISSISSIPPI COLLEGE LAW REVIEW 21 (1996). *See also* ELECTRONIC DISCUSSION, 17 MISSISSIPPI COLLEGE LAW REVIEW 91, 93, 102 (1996).

Comment on Painter, 65 FORDHAM LAW REVIEW 201 (1996).

The Q-Word As Red Herring: Why Disparate Impact Liability Does Not Induce Hiring Quotas, 74 TEXAS LAW REVIEW 1485 (1996) (with Peter Siegelman).

Review, *Overcoming Law*, by Richard A. Posner, 40 AMERICAN JOURNAL OF LEGAL HISTORY 371 (1996).

Pursuing Deficit Reduction Through Diversity: How Affirmative Action at the FCC Increased Auction Competition, 48 STANFORD LAW REVIEW 761 (1996) (with Peter Cramton).

Supply Side Inefficiencies and Competitive Federalism, in INTERNATIONAL REGULATORY COMPETITION AND COORDINATION: PERSPECTIVES ON ECONOMIC REGULATION IN EUROPE AND THE UNITED STATES (Oxford University Press, 1996) (McCahery, Barattón et al. eds.)

Distinguishing Between Consensual and Nonconsensual Advantages of Liability Rules, 105 YALE LAW JOURNAL 235 (1995) (with Eric Talley).

Further Evidence of Discrimination in New Car Negotiations and Estimates of Its Cause, 94 MICHIGAN LAW REVIEW 109 (1995).

Review, *The Limits of Freedom of Contract*, by Michael J. Trebilcock, 33 JOURNAL OF ECONOMIC LITERATURE. 865 (1995).

Aid Diversity, and the Treasury, NEW YORK TIMES F13 (May 21, 1995) (with Peter Cramton).

HLA Matching in Renal Transplantation, 332 THE NEW ENGLAND JOURNAL OF MEDICINE 752 (1995) (with Robert Gaston and Mark Deierhoi).

Solomonic Bargaining: Dividing A Legal Entitlement To Facilitate Coasean Trade, 104 YALE LAW JOURNAL 1027 (1995) (with Eric Talley).

Supply-Side Inefficiencies in Corporate Charter Competition: Lessons from Patents, Yachting and Bluebooks, 43 KANSAS LAW REVIEW 541 (1995).

Race and Gender Discrimination in Negotiation For the Purchase of a New Car, 84 AMERICAN ECONOMIC REVIEW 304 (1995) (with Peter Siegelman).

Alternative Grounds: Epstein's Discrimination Analysis in Other Market Settings, 31 UNIVERSITY OF SAN DIEGO LAW REVIEW 67 (1994).

A Market Test for Race Discrimination in Bail Setting, 46 STANFORD LAW REVIEW 987 (1994) (with Joel Waldfogel).

Preliminary Thoughts on Optimal Tailoring of Contractual Rules, 3 SOUTHERN CALIFORNIA INTERDISCIPLINARY LAW JOURNAL 1 (1993).

Relational Investing And Agency Theory, 15 CARDOZO LAW REVIEW 1033 (1994) (with Peter Cramton).

Economic Rationales For Mediation. 80 VIRGINIA LAW REVIEW 323 (1994) (with Jennifer Brown).

Mutual and Unilateral Mistake in Contract Law, 22 JOURNAL OF LEGAL STUDIES 309 (1993) (with Eric Rasmusen).

Racial Equity in Renal Transplantation: The Disparate Impact of HLA-Based Allocation, 270 JOURNAL OF AMERICAN MEDICAL ASSOCIATION 1352 (1993) (with Robert Gaston, Laura Dooley and Arnold Diethelm). *Response to letters-to-the-editors*, 271 JOURNAL OF AMERICAN MEDICAL ASSOCIATION 269 (1994).

Unequal Racial Access to Kidney Transplantation, 46 VANDERBILT LAW REVIEW 805 (1993) (with Laura Dooley and Robert Gaston).

Making a Difference: The Contractual Contributions of Easterbrook and Fischel, 59 UNIVERSITY OF CHICAGO LAW REVIEW 1391 (1992), reprinted in 35 *Corporate Practice Commentator* 65 (1993).

Designing Responsive Regulatory Institutions, 2 THE RESPONSIVE COMMUNITY 41 (1992) (with John Braithwaite).

Price and Prejudice. THE NEW REPUBLIC 30 (July 6, 1992).

Judging Close Corporations in the Age of Statutes, 70 WASHINGTON UNIVERSITY LAW QUARTERLY 365 (1992).

Partial Industry Regulation: A Monopsony Standard for Consumer Protection, 80 CALIFORNIA

LAW REVIEW 13 (1992) (with John Braithwaite).

RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE (OXFORD UNIVERSITY PRESS 1992) (with John Braithwaite).

Strategic Contractual Inefficiency and the Optimal Choice of Legal Rules, 101 YALE LAW JOURNAL 729 (1992) (with Rob Gertner).

The Possibility of Inefficient Corporate Contracts, 60 CINCINNATI LAW REVIEW 387 (1991).

Three Approaches to Modelling Corporate Games: Some Observations, 60 CINCINNATI LAW REVIEW 419 (1991).

Tripartism: Regulatory Capture and Empowerment, 16 LAW AND SOCIAL INQUIRY 435 (1991) (with John Braithwaite).

Pregnant With Embarrassments: An Incomplete Theory of the Seventh Amendment, 26 VALPARAISO UNIVERSITY LAW REVIEW 385 (1991).

Back to Basics: Regulating How Corporations Speak to the Market, 77 VIRGINIA LAW REVIEW 945 (1991).

Fair Driving: Gender and Race Discrimination in Retail Car Negotiations, 104 HARVARD LAW REVIEW 817 (1991).

Optimal Pooling in Claims Resolution Facilities, 53 LAW AND CONTEMPORARY PROBLEMS 159 (1990).

"I'll Sell It To You at Cost:" Legal Methods to Promote Retail Markup Disclosure, 84 NORTHWESTERN LAW REVIEW 1047 (1990) (with F. Clayton Miller).

Analyzing Stock Lockups: Do Target Treasury Sales Foreclose or Facilitate Takeover Auctions?, 90 COLUMBIA LAW REVIEW 682 (1990).

Playing Games with the Law, 42 STANFORD LAW REVIEW 1291 (1990).

Unlocking the Stock Lockup in Mobil v. Marathon Oil, 1 JOURNAL OF MERGER AND ACQUISITION ANALYSIS 37 (1990).

Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules, 99 YALE LAW JOURNAL 87 (1989) (with Robert Gertner).

Colleges in Collusion, THE NEW REPUBLIC 19 (October 16, 1989).

A Private Revolution: Markovits and Markets, 64 CHICAGO-KENT LAW REVIEW 861 (1989).

The Economics of the Insurance Antitrust Suits: Toward an Exclusionary Theory, 63 TULANE LAW REVIEW 971 (1989) (with Peter Siegelman) reprinted 4 NATIONAL INSURANCE LAW REVIEW 1 (1990) and 4 INSURANCE LAW ANTHOLOGY 501 (1989-1990).

Determinants of Airline Carrier Conduct, 8 INTERNATIONAL REVIEW OF LAW & ECONOMICS, 187 (1988).

A Theoretical Fox Meets Empirical Hedgehogs: Competing Approaches to Accident Economics, 82 NORTHWESTERN LAW REVIEW 837 (1988).

Halfway Home, 13 LAW AND SOCIAL INQUIRY 413 (1988).

How Cartels Punish: A Structural Theory of Self-Enforcing Collusion, 87 COLUMBIA LAW REVIEW 295 (1987).

Posner's Symphony No. 3: Thinking About the Unthinkable, 39 STANFORD LAW REVIEW 791 (1987) (with John Donohue).

Rationalizing Antitrust Cluster Markets, 95 YALE LAW JOURNAL 109 (1985).

NAMED LECTURES

The John M. Olin Lecture in Law and Economics, "Why Not?: Can Legal Creativity Be Taught?," Michigan Law School, September 11, 2003.

The Monsanto Lecture in Tort Reform and Jurisprudence, "Using Tort Settlement To Cartelize," Valparaiso University, School of Law, March 26, 2000.

The John M. Olin Public Lecture in Law and Economics, "Coveting Thy Neighbor's Stock: Substitute Trading as Evasion and as Policy Tool," University of Toronto, September 24, 1999.

The Ladd Lecture, "Empire or Residue: Competing Visions of the Contractual Canon," Florida State College of Law, October 22, 1998.

The Monsanto Lecture in Tort Reform and Jurisprudence, "Protecting Property with Puts," Valparaiso University, School of Law, March 26, 1998.

Inaugural Lecture for William K. Townsend Chair, "Solomonic Bargaining," Yale Law School, November 15, 1994.

The Mirikitani Lecture in Law and Economics, "Back to Basics," University of Hawaii,

March 9, 1990.

PROFESSIONAL MEMBERSHIP

Member, American Law Institute, 1997-.

Board of Directors, American Law and Economic Association, 1995-1999.

Admitted, Illinois Bar, 1987.

AWARDS

Research in the Public Interest, The Center for Public Representation, 1991.

ACTIVITIES

1st Place, Law and Society Association -- 5 kilometer fun run, 1989, 2002 and 2003.

Completed 1984 Boston marathon in 3 hours, 12 minutes.

Whiffenpoofs, 1980-81.

Yale Russian Chorus, 1977-80.

Semester in Soviet Union, Moscow's Pushkin Institute, Spring 1979.

CURRENT AS OF JULY 1, 2004

Exhibit 2: Matters on which Ian Ayres Has Testified or Written Disclosed Report

Smith v. CFC (2004) No. 00-6003 (D.N.J.) (expert concerning disparate impact of finance markups).

Jones v. FMCC (2004) No. 00 CIV 8330 (S.D.N.Y.) (testifying expert concerning disparate impact of finance markups).

Coleman v. GMAC (2003) No. 3-98-0211 (M.D. Tenn) (testifying expert concerning disparate impact of finance markups).

Monsanto v. Scruggs (2002) Civil Action No. 3:00CV-161-P-A (N.D. Miss) (testifying expert concerning GM seed antitrust and patent abuse claims).

Rodriguez v. FMCC (2002) No. 01 C 8526 (N.D. Ill.) (submitted report concerning disparate impact of finance markups).

Cisco System, Inc (2001) (transfer pricing report prepared for IRS).

Cason v. Nissan Motor Acceptance Corp (2001) 3-98-0223 (M.D. Tenn.) (testifying expert concerning disparate impact of finance markups).

Star Scientific v. Steve Carter (2001) IP01-0838 C T/G (S. D. Indiana) (testifying expert concerning MSA qualifying statute).

Johnson v. City of Tulsa (2001) 94-C-39-H (N.D. Okla.) (submitted report concerning racial profiling by Tulsa Police Department).

Wisconsin v. Rent-a-Center (2000) (testifying expert concerning rent-to-own transaction).

Dynalantic Corp. v. United States Department of Defense (1999) (submitted report concerning narrow tailoring of affirmative action in government procurement).

Colon v. Rent-a-Center (1999) (wrote report concerning rent-to-own transaction).

Rothe Dev. Corp. v. United States, (1999) (testifying expert concerning narrow tailoring of affirmative action in government procurement).

Chiron Corp. v. Hoffman-La Roche (1999) (submitted report concerning interpretation of contract releasing certain claims concerning Hepatitis C patent).

Teledyne v. Boeing (1998) (testifying expert re: contractual and antitrust issues of Apache attack Helicopter fuselage procurement).

Connecticut Municipal Electric Energy Cooperative v. Connecticut Light & Power Co. (February 1998) (submitted report concerning interpretation of Life-of-Unit nuclear power

output contract).

F. Buddie Contracting Ltd. v. Cuyahoga Community College District (March 1998) (submitted expert report re: narrow tailoring of procurement affirmative action plan).

Lufkin v. IDES and CMS (January 1998) (consulting expert; re: disparate impact and Equal Pay Act challenge to Illinois compensation plan).

DOJ's PCS Auction Investigation (June 1997) (non-testifying expert on competitive effects of auction bidding strategies).

Cassandra Burney et al. v. Rent-a-Center (1996-97) (testifying expert; re: excess interest charged in rent-to-own agreements).

Mother Bertha Music, Ltd. v. Bourne Music Ltd. (May 1996) (consulting expert; re: interpretation of copyright assignment contract).

U.S. v. Christopher Barnes (March 1996) (testifying expert, re: statistical representation of minorities in federal criminal venires).

U.S. v. John M. Purdy, Jr. (February 1996) (testifying expert; re: statistical representation of minorities in federal criminal venires).

Johnson v. Apple (July 1994) (testifying expert; re: disparate treatment and damages).

Williams v. Du Pont (July 1993) (affidavit expert; re: appropriate prejudgement interest rate).

AT&T (September 1993) (consulting expert; re: appropriate preconditions for lifting interexchange restriction).

James E. Gilleran, et al. v. Deno Evangelista, et al. (October 1992) (testifying expert; re: fiduciary duties of officers and directors).

Neiman Marcus Group v. Federated Department Stores (January 1992) (consulting expert; re: covenant not to compete).

In re Fare Box Litigation (1989) (testifying expert; re: relevant market and merger to monopoly).

In re Insurance Antitrust Litigation (1988 - 1991) consulting expert; re: antitrust claims of 17 state Attorneys General against major commercial insurers).

Exhibit 3: DOCUMENTS CONSIDERED

1. Selected Rate Sheets, AHFC Quick Reference Guide & Special APRs
2. Fishback and Willis vs. AHFC, No. 3-02-0490 (M.D.Tenn.), Deposition of Stephen E. Smith.
3. Fishback and Willis vs. AHFC, No. 3-02-0490 (M.D.Tenn.), Deposition of James Ichien.
4. Fishback and Willis vs. AHFC, No. 3-02-0490 (M.D.Tenn.), Deposition of Richard H. Houchins
5. Fishback and Willis vs. AHFC, No. 3-02-0490 (M.D.Tenn.), Deposition of John Oda.
6. Fishback and Willis vs. AHFC, No. 3-02-0490 (M.D.Tenn.), Deposition of Wendi Sheehan.
7. Tonya R. Howell Deal Documents, CHW-TH0001-46.
8. Terry O. Willis Deal Documents, Plt-TWL00001-00005, Crest-00001-000032
9. Charles L. Scott Deal Documents, CHW-CS0001-0028
10. Marcelino F. Cherry Deal Documents, Plt-MC00001-00013, CHERRY0001-0039
11. Honda Retail, Lease, Program and Residual Value Guidebook - Effective May 1, 2003 - June 30, 2003 (AHF002391 - AHF002443)
12. Honda Finance AHFC Program and Residual Value Guidebook – Effective Nov. - Dec. 2000 (AHF013301 - AHF013374)
13. 5/11/04 Deposition of John Oda - Exhibit 12
14. 5/11/04 Deposition of John Oda - Exhibit 13
15. 5/11/04 Deposition of John Oda - Exhibit 14
16. 5/11/04 Deposition of John Oda - Exhibit 15

Exhibit 4: TABLE 1

Meta-Analysis of Estimated Price Premium Over White Males in Four Studies of Markups on New Cars, by Demographic Group					
Demographic Group	Chicago "Pilot" Audit (Ayres)	Chicago Full Audit (Ayres/Siegelman)	National CES Consummated Sales (Goldberg)	Atlanta Consummated Sales	Weighted Average
White Females	220† (129) [21]	216* (116) [53]	129 (117) [244]	-11† (97) [164]	85 (113) [482]
Black Females	1013***† (124) [23]	465*** (103) [60]	426 (525) [28]	865***† (92) [224]	756*** (181) [335]
Black Males	283*** (136) [18]	\$1133***† (122) [40]	\$274 (263) [39]	611***† (96) [178]	607*** (143) [275]
Adjusted R-Squared	.37	.33	.14	.36	

Notes and Sources: This Table is reproduced from Ian Ayres, *Pervasive Prejudice* (forthcoming 2002).
 Col. 1, Ian Ayres, *Harvard Law Rev.*
 Col. 2, Chapter 2, Table 2.1 (Col. 2)
 Col. 3, Pinelopi Goldberg, *Dealer Price Discrimination in New Car Purchases: Evidence from the Consumer Expenditure Survey*, 104 *J. POL. ECON.* 622 (1996), Table 2, Col. 1 and Table 5. Goldberg's tested for differences between "Minority" and "Non-Minority" purchasers. See supra note 15 and accompanying text.
 Col. 4, This chapter, Table 4.4 (Col. 6)

Standard errors in parentheses. Number of observations in brackets.
 * = significantly different from zero at the 10% level.
 ** = significantly different from zero at the 5% level.
 *** = significantly different from zero at the 1% level.
 † = significantly different from CES (Goldberg) estimate at the 5% level

Exhibit 5: TABLE 2

Profit and Markup Regressions Detailing Basic Racial/Gender Disparities						
Purchaser Type	Vehicle Profit	Finance Profit	Total Profit	Vehicle Markup	Finance Markup	Total Markup
Constant	229.16*** (45.84)	504.69*** (48.95)	526.25*** (64.43)	.0258*** (.0064)	.0431*** (.0052)	.0510*** (.0079)
White Female	-22.94 (74.14)	57.70 (79.32)	9.17 (104.21)	-.0029 (.0103)	.0088 (.0084)	.0027 (.0128)
Black Male	405.04*** (72.32)	470.79*** (72.16)	836.81*** (101.65)	.0534*** (.0100)	.0439*** (.0077)	.0931*** (.0124)
Black Female	504.99*** (67.73)	589.01*** (68.18)	1018.40*** (95.21)	.0614*** (.0094)	.0566*** (.0072)	.1098*** (.0116)
N	831	551	831	822	544	822
R-squared	.09	.15	.17	.08	.125	.138
Reproduced from Chapter 4 of Ayres, Pervasive Prejudice? (2001) Standard errors in parentheses. * = significantly different from zero at the 10% level. ** = significantly different from zero at the 5% level. *** = significantly different from zero at the 1% level.						