The Impact of Attorney Compensation on the Timing of Settlements

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Abstract: Using Federal Judicial Center data on class action settlements, we find that plaintiffs' lawyers who expect to be compensated using the lodestar, or hourly fee, method systematically delay settlement to accrue additional fees. Plaintiffs' attorneys who expect to be compensated on a percentage basis of any settlement or award, on the other hand, settle their cases more quickly as predicted by the Spier (1992) settlement model. These results cast doubt on the potential for lodestar calculations to police the conduct of plaintiffs' lawyers in class actions.

1. INTRODUCTION

The American legal system relies on plaintiffs' lawyers to deter negligent or illegal behavior in those contexts where harm is spread diffusely among victims. In these cases, due to the transactions costs inherent in litigation, individual victims will not have an incentive to litigate their separate claims, even if doing so would lead to a social gain through increased deterrence. The class action mechanism gives the plaintiffs' attorney a property right in the aggregate claim to overcome the collective action problem that would otherwise leave the costly activity undeterred.

However, the U.S. legal system does not completely sever the claim from the victims, as the plaintiffs' attorney is only given a fraction of any settlement or judgment arising from the claim, with the rest of the funds going to members of the victim class. This gives rise to agency costs as the lawyer's interests are not completely aligned with his ostensible clients' interests. While agency costs arise in almost any case where the victim hires an attorney to litigate his claim, the agency costs in the class action context are likely to be particularly acute. Class members will have very little incentive to monitor their lawyer given their small stake in the total claim.

This agency problem has the potential to lead to collusive deals in which the plaintiffs' lawyer is willing to accept a deal in which the victim class gets relatively little in real value, as long as the fees going to the plaintiffs' attorney are substantial. A defendant will generally only care about minimizing the cost of the settlement or award, paying little attention to how the funds are

split between the lawyer and his clients. Further, because plaintiff classes do not select their attorneys, class action lawyers have little to worry about in terms of damaging their reputations by agreeing to a deal that provides relatively little compensation to victims as a group.

To mitigate this problem, in principle, U.S. law places the presiding judge in the role of protecting class members' interests in the settlement process. Judicial approval is required of all terms of a class action settlement, including the awarding of attorney fees. However, many scholars and critics have suggested that, in practice, judges do not scrutinize settlements in general and fees in particular closely enough. To address this problem, some courts use the lodestar method of determining fees in which the plaintiffs' lawyer submits an accounting of the number of hours he has worked on the case and the judge multiplies that number by the prevailing hourly rate for legal services in the local market. Presumably, this "objective" determination of the attorney's compensation attenuates the incentive for the plaintiffs' lawyer and the defendant to come to a collusive arrangement at the victims' expense.

However, the lodestar method of determining compensation has the potential to generate different agency costs. For example, if a perfectly reasonable settlement is offered by the defendant early in negotiations, the plaintiffs' attorney has little to gain from accepting the settlement if he is going to be paid on an hourly basis. Thus, in this situation, lodestar creates an incentive for wasteful delay that benefits the plaintiffs' lawyer in the form of higher fees at the expense of the class itself, due to the time value of money, and the defendant, due to continued uncertainty and its own attorney fees.

The degree to which an attorney has an incentive to engage in this wasteful delay depends on the level of scrutiny he expects from the presiding judge. A judge who monitors the settlement process closely is likely to detect this strategy and will lower the attorney's fee accordingly.

Using Federal Judicial Center data on class action settlements, we examine whether plaintiffs' lawyers game the lodestar system through wasteful delay. We use a semi-parametric proportional hazards model to estimate the effect the expected choice of compensation system has on the duration of settlement negotiations. We find that cases pending in courts with a history of using lodestar to calculate fees are less likely to settle early in the negotiations and the probability of settlement goes up as the trial date grows near compared to cases heard in courts that tend not to use lodestar calculations. In courts that generally award fees as a percentage of settlements, settlements occur early in the process and the probability of settlement decreases as the trial grows near, consistent with the Spier (1992) model of settlement. These results are consistent with a model of wasteful delay, and they cut against using the lodestar method of fee determination to protect class members' interests.

2. THEORY AND EVIDENCE ON FEES AND SETTLEMENT

2.1 Fees in Class Actions

As discussed in Helland, Klick, and Tabarrok (2005), data limitations hamper the systematic study of many aspects of the civil justice system in the U.S. This claim applies to research in the area of attorney fees as well. In the class action context, much of the existing research focuses on anecdotal evidence that might be biased toward particularly egregious cases.

Even the more systematic research is limited in its scope, focusing on only a few courts (e.g., Willging, Hooper, and Niemic, 1996, which finds that the mean attorney fee is around 30 percent of the net monetary distribution to the plaintiff class) or substantive areas (e.g., Lynk, 1994, which examines securities class actions and finds a mean attorney fee of about 26 percent of the total payout to class members). Eisenberg and Miller (2004) take a large step forward in this

regard by developing and analyzing a dataset of class action settlements that spans both state and federal courts from 1993 to 2002, as well as multiple litigation fields. The Eisenberg and Miller study suggests that the average fee in class action settlements is about 22 percent.

However, given the dearth of systematic evidence regarding attorney's fees in class actions and the large agency problems that exist when victims can neither choose nor monitor their attorney, the legal system imposes a number of safeguards to check the reasonableness of the terms of class action settlements, including the attorney fees awarded. The primary institutional safeguard involves the requirement that the presiding judge monitor the settlement process to make sure the interests of the victims in the class are met. Recent work by Helland and Klick (2007) suggests that judges are relatively weak monitors, at least when it comes to attorney fees. They show that as court congestion grows, judges systematically scrutinize settlements less fastidiously in order to reduce their workload. This has the effect of leading to higher fees for the plaintiffs' attorney bringing a given case.

Perhaps recognizing the inability of judges to monitor attorney fees effectively, some have called for greater reliance on the lodestar method of fee determination. Under the lodestar method, attorneys indicate how many hours they have spent working on the case, and then the presiding judge multiplies that number by a prevailing hourly rate for attorney services in the local market. While judges do have some discretion under the lodestar system to consider things like the risk of the case and the delay between the time the work is done until payment is made, the lodestar system is meant to provide an objective baseline for the fee awarded as part of a settlement or judgment. Interestingly, Eisenberg and Miller (2004) find that lodestar calculations have little effect on fees awarded in their dataset of class action settlements. Brickmann (2001) suggests that lodestar does not provide an adequate check on attorney abuse because it is impossible to verify the

amount of hours an attorney has invested in a case, leading attorneys to overstate their efforts. Even if attorneys are completely forthcoming about the amount of time they spend on a given case, there is little to guarantee that the time spent was actually in the class members' best interests.

2.2 Settlement in Class Actions

The well-known dynamic settlement model of Spier (1992) generates a U shaped pattern of settlement likelihoods when negotiation and litigation are costly for the plaintiff,[1] and when the defendant has private information regarding its level of wrong-doing. In the case of a uniform distribution of defendant types, if the trial date is set for period $T+1$, there is a continuous decline in the likelihood of settlement from period 1 to period $T-1$ and a large likelihood of settlement on the courthouse steps in period T. The intuition for this result is straightforward. The "discount" the plaintiff is willing to give a defendant with a high degree of wrongfulness will be proportional to the amount of negotiation costs it can avoid, which is larger in earlier periods. As the discount declines, a smaller proportion of defendants will find it to their advantage to settle. In the last period before the trial, if litigation costs are greater than negotiation costs, the plaintiff will again be willing to provide a large discount to avoid going to trial.

Extending Spier's results to the case where a class action lawyer decides which settlement amounts to offer is trivial in cases where the lawyer receives a percentage of any settlement as his fee. In such a case, we should observe the same settlement pattern as implied in the Spier model, with the likelihood of settlement declining continuously as negotiations go on, with a spike in settlement likelihood occurring just prior to the trial date, as long as the costs of litigation are greater than the costs of negotiation. Functionally, since the lawyer controls the case in the class

[1] Spier's results generalize to the case where negotiation and litigation are costly for the defendant as well.

action context, the plaintiffs' attorney has effectively the same incentives as the decisionmaker in the Spier model if his fee is calculated as a percentage of the settlement amount.[2]

However, the settlement dynamics change in situations in which the class action attorney is compensated on an hourly basis, as occurs when a lodestar calculation is performed. Under this method of fee determination, as long as the hourly rate used by the court exceeds the lawyer's opportunity cost, the per period negotiation cost in the Spier model effectively becomes negative, especially given that judges have the discretion to compensate the lawyer for the delay between the attorney's work and the ultimate payment.[3] Obviously, a negative per period negotiation cost will induce the plaintiffs' lawyer to delay settlement until the period just before the case goes to trial. Moving beyond the Spier model, in practice, going to trial adds a risk that the plaintiffs' lawyer will not be successful and, therefore, will not be paid. Formally, even if the court were to pay a higher per period rate for trial time under lodestar, the attorney will only be willing to take the case to trial if the total amount of fees accrued during settlement negotiations (S) are less than the probability of a trial victory (p) multiplied by the sum of S and the total fee the attorney expects to collect for trial periods (L). This condition simplifies to:

$$\frac{S}{L} < \frac{p}{1-p}.$$

This implies that if the likelihood of a trial victory is 50 percent (as suggested in the Priest Klein model of litigation), the attorney must expect to accrue more fees from litigation than he has accrued during the settlement period to make it worthwhile to go to trial. If the likelihood of success is less than 50 percent, L must be even larger than S to induce the attorney to force a trial.[4]

[2] There will be a scaling effect as the attorney bears the negotiation costs but only receives a fraction of the settlement.
[3] See Silver (1992).
[4] All of the foregoing holds in the case of risk neutrality. If the attorney is risk averse, the range over which going to trial is attractive to the attorney becomes even smaller.

Combining the fact that most trials will be shorter than the settlement period (and thus *S* will be larger than *L* unless the trial rate paid under lodestar exceeds the settlement period rate by a significant amount) with the fact that trial time is more costly than negotiation time (as assumed in the Spier model), plaintiffs' lawyers operating in the expectation that lodestar will be applied have a strong incentive to settle cases just before a trial begins but not earlier.[5] Settling earlier than that actually costs the plaintiffs' lawyer rents. Further, just prior to the trial, the plaintiffs' attorney will be willing to accept effectively any settlement that is likely to pass judicial muster since the lawyer's take is independent of the settlement amount.

Again, a particularly fastidious judge might be able to detect this kind of wasteful delay, reducing the number of hours upon which the lodestar calculation is performed. However, as suggested by Helland and Klick (2007), doing this will delay the termination of the class action, increasing the judge's workload. On the other hand, the judge faces little cost in simply accepting the attorney's fee request, as objection from the class members or the defendant is unlikely.

3. THE IMPACT OF COMPENSATION ON SETTLEMENT TIMING

3.1 Estimation of the Probability of Settlement in Each Period

To examine whether or not plaintiffs' attorneys game the lodestar system, we examine the duration of the settlement process as a function of the lawyer's expectation of what the compensation method will be and the time until the trial date. Specifically, we interact the observed percentage of cases in the district for which a lodestar amount has been computed with a measure of the time until trial. We also include the time to trial variable directly. If lawyers do game the lodestar system, we should find a negative relationship between the lodestar proportion

[5] For example, in our data there are 17 trials lasting an average of 9.5 days with a median of 5 days. The longest trial is 44 days with many lasting a single day. By contrast settlement negotiations last an average of 896 days with a median of 722. The shortest is 66

and time to trial interaction and the likelihood of settlement in a given period. If the Spier (1992) model applies to cases under both compensation schemes, we should find a positive relationship between both the interaction term and the time until trial and the likelihood of settling in a given period. On the other hand, if Spier's model only applies in the percentage fee case, we should only find a positive coefficient for the time to trial and a negative coefficient on the interaction (controlling for the spike right before the trial date).

To estimate the impact of different methods of fee determination on the timing of settlements we estimate a semi-parametric proportional hazard model (Meyer 1990).[6] The semi-parametric model is flexible and imposes fewer restrictions than do models that force duration times to follow a Weibull or other fixed distribution.[7] In addition, the model controls for sample selection in estimating the probability of settlement because, in effect, all the cases that go to trial or are dropped are treated as censored (Meyer 1990). The hazard function of case *i* is the probability that a case settles at time τ, conditional on the case having continued (i.e. survived) to τ. The hazard function is given by

$$\lambda_i(\tau) = \lim_{\Delta \to 0} \frac{\Pr(\tau < t_i < \tau + \Delta \mid t_i > \Delta)}{\Delta} = \lambda_0(\tau) = \lambda_0(\tau) e^{\beta' x_i} .$$

where the baseline hazard $\lambda_0(\tau)$ and β are parameters to be estimated. To estimate the model, Meyer (1990) describes the likelihood of an observed duration as the following.

$$\log(1 - F(\tau \mid x_i)) = -\int_0^{\tau} \lambda(u \mid x_i) du$$

days and the longest is 3502 days. While all of these days are likely not billable it seem unlikely that the litigation billable hours could be more valuable than billable hours from settlement negotiation.

[6] See Kessler 1996 for the use of this model in a similar problem.

[7] One reason, noted by Kessler (1996) for estimating a flexible hazard rate is Spier's (1992) dynamic bargaining model that suggests that the hazard rate may not be monotonic. For alternative approaches see Fournier and Zuenlke (1996) and Fenn and Rickman (1999)

where $F(\tau \mid x_i)$ is the probability of settlement after τ days have elapsed. Thus the log probability that a case does not settle (i.e., survives) is $\log(1 - F(\tau \mid x_i))$. This is the log of the survival function and the integral of the hazard is

$$\log(1 - F(\tau \mid x_i)) = -\int_0^{\tau} \lambda(u \mid x_i)$$

If we divide the data into ten discrete time periods, then

$$\begin{aligned} F(t \mid x_i) &= 1 - \exp\left[-\int_0^{\tau(t)} \lambda_0(u)du \cdot \exp(x_i\beta_i + \gamma_1 time\ trial + \gamma_1 \%lodestar * time\ trial + \delta(t)) \right] \\ &= 1 - \exp\left[-\sum_{j=1}^{t} \int_{\tau(j-1)}^{\tau(j)} \lambda_0(u)du \cdot \exp(x_i\beta + \gamma_1 time\ trial + \gamma_1 \%lodestar * time\ trial + \delta(t)) \right] \\ &= 1 - \exp\left[-\sum_{j=1}^{t} \exp(x_i\beta + \gamma_1 time\ trial + \gamma_1 \%lodestar * time\ trial + \delta(t)) \right], \end{aligned}$$

where *time trial* is the time until trial, *%lodestar* is the percentage lodestar in the district office and $\delta(t)$ is the discrete hazard rates interacted with the percentage of cases in which fees are determined by the lodestar method and percentage of the settlement fund respectively. Kessler (1996) and Meyer (1990) present a more complete description of the model.

A principal advantage of the technique is that the parameters of the covariates are invariant to the choice of time intervals (Meyer 1990). We define 10 discrete periods to form a settlement spline. Periods 1-10 are those cases settled by the 90, 157, 222, 300, 399, 510, 708, 887, 1329, 1330+ days after filling. Further, we include all cases that go to trial, are dismissed, or are dropped by treating them as censored at the point of trial or withdraw. The second advantage of this approach is that it is easy to incorporate time varying parameters such as events that occur as the case progresses toward resolution.

3.2 Data and Specification

To estimate the probability of settlement we use data from the Federal Judicial Center's report "Empirical Study of Class Actions in Four Federal District Courts" (Willging et al 1996). The Judicial Center's data cover all cases in the Eastern District of Pennsylvania, Southern District of Florida, Northern District of Illinois, and the Northern District of California. The data cover all cases resolved between July 1, 1992 and June 30, 1994. There are 408 cases total of which 117 come from Pennsylvania, 72 from Florida, 117 from Illinois and 102 from California.

The Judicial Center data is not a random sample but a field study. It covers the population of cases in that time period in those districts. The districts were not chosen at random and are not intended to be representative of all class actions in the federal courts. Given the nature of the estimation technique, each case can have up to 10 discrete time periods. During that time period some features of the case may change. We refer to these features as time varying covariates and those case features that remain constant as non-time varying covariates. Our variables of interest are the interaction terms described above.

We interact the likelihood of getting a percentage fee measure with the time until trial if a court date has been set (about 17 percent of the sample). The trial date set variable is equal to one for all periods after the trial is set. For those cases with a set trial date, we subtract the midpoint of the discrete time period from the trial date. Thus, for cases in period 1, the time is measured from the 45th day since the case was filed. For reasons of scaling this number is then converted into months by dividing by 30 days. The midpoint method allows the time to trial to vary depending on the duration of the case at each observation. As such it is a measure of the risk of trial conditional on a trial date being set.

Because trials are delayed it is possible for this measure to be negative if the judge in the case allows negotiations to continue beyond the trial date without starting a trial or if negotiations continue during the trial. Thus a negative number can reflect either a postponement of trial or ongoing negotiations during the length of a trial. In only one cases does a settlement occur during the trial so we are unable to isolate the impact of these two effects separately. We truncate time if the case reaches a verdict without a settlement (17 cases); although in several cases a settlement was reached before an appeal. We view these cases as beyond the purview of Spier's model and hence treat them as truncated. By these criteria we have 154 cases that settle before trial.

We include the time until trial (in months) and the interaction of percent lodestar with time to trial allowing us to determine if the impact of approaching the trial on probability of settlement differs by which fee arrangement the plaintiffs' attorney expects. To control for differences between jurisdictions that might be captured by the percentage of fees based on the lodestar method in the district office, we include the percentage as an independent variable without interaction. We also include an indicator variable for whether the trial has been set.

We have four other time varying covariates. We include an indicator variable if there currently are other cases covering the same mater in either state or federal court. If these cases are resolved, this variable equals zero. Our expectation is that one cause of settlement delay may be other pending litigation making the settlement less attractive to the defendant because it would not be global.

If the judge rules against certification a second indicator variable equals one in periods after the ruling. Our expectation is that a lack of certification would decrease the likelihood of settlement. We also include indicator variables if either side has made a successful motion for summary judgment as this may increase pressure on either side to settle. Finally we include a

variable equal to one in those periods in which the judge has issued a ruling allowing expanded discovery under the assumption that this will increase the pressure on defendants to reach a settlement.

We also include ten non-time varying case controls. These non-exclusive categories are: contract cases; shareholder litigation; products liability; antitrust cases; civil rights cases; RICO cases; prison rights cases; labor disputes; and ERISA cases. We have no priors on how these case types will influence settlement time but anecdotally there appears to be some variation in case complexity depending on the subject matter of the case. The descriptive statistics are given in Table 1.

Two factors about the data deserve notice. There are 407 cases in the data of which 25 percent are shareholder litigation. Second, the average plaintiffs' attorney faces a 38 percent of having his or her fees determined by the lodestar method. Finally, in the upper portion of Figure 1, we present the Kaplan-Mier non-parametric hazard function and, in the lower, a graph of the risk set. Both show a declining likelihood of not settling the case (surviving until the next period) and both confirm the presence of several outliners which take over 2000 days to settle. This is a third reason for using the semiparametric model above to estimate the hazard function. Outliers will not unduly influence our estimates using this model.

In Table 2 we present the variation in the proportion of fees determined by lodestar. For those district-offices in which there is only one observation, we use the mean for the district as the expectation. The small number of district offices means that some care should be taken in interpreting the coefficient on the percent lodestar in the districts. The interaction term is, however, identified using variation in the time until interacted with the lodestar expectation. As such it has

considerably more variation than Table 2 would imply. Nevertheless we cluster the standard errors on the district office to control for any unobserved correlation of cases within the district office.

4. RESULTS

The results of the maximum likelihood estimate are presented in Table 3. The baseline hazard function for each period is given in the first ten rows of the table. The marginal effects on the probability of settlement in any given period are given in Table 4.

The interaction between the percentage lodestar in the district and the time until trial is negative and statistically significant. The average number of months until trial is 4.86 in the sample. Thus, at any given period taken at the average time to trial, a 10 percent increase in the proportion of cases in the district using lodestar reduces the probability of settlement by 1percent in each period. In the language of duration models, the hazard rate increases by 1 percent holding all else constant. Figure 2 presents a graph of the hazard functions holding all variables at their means and varying months to trial and percent lodestar. The predicted lodestar hazard (i.e. probability of settlement) is constructed by assuming that the percentage lodestar in the district office is one, hence lodestar with certainty, and the hazard rate for non-lodestar is constructed by assuming it is zero. As is evident from the diagram the likelihood of settlement increases with each month for lodestar districts while it declines for non-lodestar districts. We also find support for the Spier (1992) model of settlement when lawyers expect to be compensated through a percentage fee. When the percentage lodestar is zero the probability of settlement declines as time to trial decreases.

Several of the control variables are statistically significant. One result that potentially has an impact on the above results is the setting of a trial date; holding the time to trial constant reduces

the likelihood of settlement in any given period by 3 percent perhaps indicating that trial dates are set in those cases in which the parties seem unable to reach a settlement. Finally class action cases alleging anti-trust violations are more likely to settle in each period than other cases and prison class actions are less likely to settle each period.

Columns 2 and 3 of Table 3 present two different methods of estimating the impact of an impending trial. The results in column 1 suggest that the trial date is potentially endogenous. Namely, trial dates may be set in cases in which the litigants appear to be deadlocked. Since this would tend to bias the results toward zero, we can treat our results as lower bounds. More concerning is the possibility that a judge may delay a trial in a case in which the litigants are nearing a settlement. If this is the case, we might well conclude that the impact of trial risk on settlement is positive while, in fact, we would be identifying the judge's decision to delay the trial to give the litigants more time to reach an agreement. In one sense, the comparison of lodestar and non-lodestar cases already controls for this endogenity to the extent it affects both types of cases equally. Nevertheless, we run two robustness checks to assure that this potential confound is not contaminating the results.

To test the robustness of our result, we estimate the model using a series of indicator variable for 6 months or less to trial and 12 months or less to trial. We interact these variables with the portion of cases in the district office using lodestar and not using lodestar.

The results are consistent with the Spier (1992) model's prediction that the "court house steps" affect lodestar and non-lodestar cases differently. Specifically for cases with 6 months or less until their scheduled trial date, a 10 percent increase in the proportion of cases in which fees are determined by lodestar increases the probability of settlement each period by 23 percent. For cases under 12 months, the same decreases the probability of settlement by 24 percent. Likewise

the impact of an increase in the portion of non-lodestar fee cases decreases the likelihood of settlement. The variables are highly correlated according to a chi squared test of joint significance (11.05) which indicates joint significance at greater than the 5 percent level. Further, the difference between the coefficients for our 6 month time to trial lodestar interaction and our 12 month time to trial lodestar interaction is statistically significant ($p = 0.02$).

Column 2 of Table 3 addresses the courthouse steps phenomenon but not the risk of trial to the extent that trial is more likely 6 months from the trial date relative to 12 months. Column 3 of Table 3 addresses the problem in a different way. In column 3, we again measure the days to trial date but this time we replace the negative numbers with zero. That is, we do not use information on the length of trial delay. The results are almost identical to column 1 indicating that the impact of lodestar is not driven by trial delay when judges are attempting to facilitate a settlement.

These results imply that there is a systematic and robust difference in the dynamics of settlement depending on what compensation mechanism a plaintiffs' lawyer expects to face when bringing a class action. While our results may be unique to the courts covered in our dataset, since it is not a random sample of all courts, there is no obvious *a priori* reason why these courts are peculiar in any important respect.

5. CONCLUSION

Using data from the Federal Judicial Center, we show that plaintiffs' lawyers in class actions game courts that use lodestar calculations to determine fee amounts. That is, we find that if a lawyer expects to face a lodestar calculation, he systematically delays settlement to accumulate more hours compared to the settlement durations in courts that generally use a percentage fee method for compensating attorneys in class actions. Our results also confirm the Spier (1992) model of settlement for class action attorneys not expecting to face a lodestar calculation. That is,

in these cases, there is a high likelihood of settlement in the first period and the likelihood declines in subsequent periods until spiking again in the last period before trial.

The results suggest that the lodestar method of fee determination is not an effective method for protecting members of the victim class from the opportunism on the part of the plaintiff class's lawyer. Presumably, judges are not willing or able to effectively police the lawyer's claims regarding how many hours of work were in the class's best interests. Combined with the results from Helland and Klick (2007), this suggests that the current efforts of courts to protect class members fall short as judges do not have strong incentives to scrutinize fee requests even if they are using a lodestar baseline to check the reasonableness of the request.

Given that judges can not be counted on to protect class members' interests, and the apparent ability of plaintiffs' attorneys to work around rules meant to constrain their opportunism, it may be important to focus reform efforts on mechanism design approaches such as that advanced in Klement and Neeman (2004) in which attorney interests are better aligned with those of their clients *ex ante*. In their system, a lodestar like calculation is made but the hourly fee declines as the duration increases. Under certain assumptions, their scheme maximizes the settlement amount received by the class. Approaches such as this one may hold the best hope of mitigating opportunism in class actions.

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Table 1 Variables and descriptive statistics

Variable	Mean	Std. Deviation
Trial Date Set	.170	.141
Motion made for summary judgment	.101	.091
Motion made for expanded discovery	.012	.110
Other cases exist with the same cause of action	.160	.367
Judge rules against certification	.189	.392
Percentage of cases using lodestar in the district office	.383	.167
Contract class action	.039	.195
Shareholder class action	.258	.438
Product liability class action	.032	.176
Other cause of action	.135	.342
Antitrust class action	.032	.176
Civil rights class action	.270	.445
RICO class action	.027	.162
Prison class action	.096	.295
Labor class action	.034	.182
ERISA class action	.064	.245

Table 2: Percent Lodestar by district office

District	Office	Percent Lodestar	Cases
13	2	.588	117
3C	0	.333	11
3C	1	.200	45
3C	2	.200	6
3C	4	.200	1
3C	9	.000	9
52	1	.421	115
52	3	.421	1
71	NA	.208	1
71	3	.278	86
71	5	.000	15

Table 3: Raw hazard model estimates of likelihood of settlement

	(1)	(2)	(3)
Baseline hazard by number of days after filing			
Period 1: <90 days	-4.922***	-4.682***	-4.898***
	(0.932)	(1.060)	(0.940)
Period 2: 91-157 days	-4.134***	-3.892***	-4.108***
	(0.712)	(1.024)	(0.718)
Period 3: 158-222 days	-4.318***	-4.073***	-4.293***
	(0.460)	(0.914)	(0.462)
Period 4: 223-300 days	-3.951***	-3.710***	-3.926***
	(0.488)	(0.824)	(0.496)
Period 5: 301-399 days	-3.612***	-3.369***	-3.586***
	(0.647)	(0.855)	(0.655)
Period 6: 400-510 days	-3.056***	-2.819***	-3.031***
	(0.485)	(0.907)	(0.491)
Period 7: 511-708 days	-3.111***	-2.870***	-3.083***
	(0.561)	(0.928)	(0.565)
Period 8: 709-887 days	-2.619***	-2.377**	-2.598***
	(0.754)	(1.118)	(0.757)
Period 9: 888-1329 days	-1.756**	-1.544	-1.739**
	(0.687)	(1.016)	(0.695)
Period 10: 1330 or greater days	-1.002	-0.782	-0.986
	(0.853)	(1.082)	(0.866)
Time varying independent variables			
Percent lodestar*months to trial	-0.156*		
	(0.092)		
Months to trial	0.087***		
	(0.032)		
Percent lodestar*6 months or less to trial		5.897**	
		(2.292)	
Percent lodestar*12 months or less to trial		-6.132**	
		(2.907)	
6 months or less to trial		-1.346***	
		(0.430)	
12 months or less to trial		1.119	
		(0.880)	
Percent lodestar*months to trial (truncated at trial date)			-0.134*
			(0.079)
Months to trial (truncated at trial date)			0.077***
			(0.030)
Trial Date Set	-1.135***	-0.990***	-1.168***
	(0.273)	(0.289)	(0.317)
Motion made for summary judgment	-0.217	-0.195	-0.219
	(0.184)	(0.163)	(0.178)
Motion made for expanded discovery	1.232	1.231	1.232

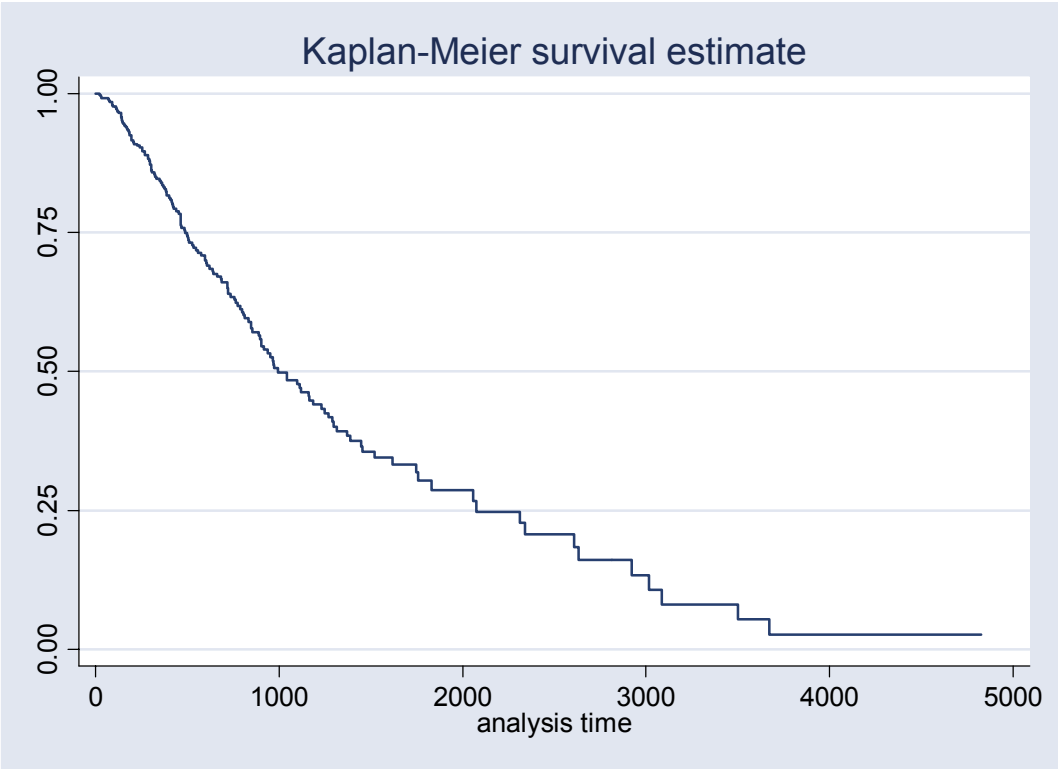
	(0.799)	(0.795)	(0.798)
Judge rules against certification	-0.303	-0.313	-0.298
	(0.379)	(0.384)	(0.381)
Non-time varying independent variables			
Percentage of cases using loadstar in the district office	0.231	0.449	0.226
	(0.495)	(2.104)	(0.497)
Other cases exist with on the same cause of action	-0.062	-0.034	-0.060
	(0.380)	(0.371)	(0.375)
Contract class action	0.219	0.219	0.199
	(0.482)	(0.439)	(0.488)
Shareholder class action	0.773	0.789	0.763
	(0.679)	(0.655)	(0.684)
Product liability class action	0.477	0.488	0.451
	(0.566)	(0.497)	(0.565)
Other cause of action	1.048	1.040	1.024
	(0.747)	(0.714)	(0.747)
Anti-trust class action	1.411***	1.400***	1.388***
	(0.092)	(0.128)	(0.091)
Civil rights class action	0.804	0.783	0.777
	(0.658)	(0.612)	(0.661)
RICO class action	1.615*	1.603**	1.591*
	(0.857)	(0.817)	(0.856)
Prison class action	-1.348***	-1.352**	-1.371***
	(0.512)	(0.573)	(0.507)
Labor class action	1.263*	1.250*	1.241*
	(0.740)	(0.695)	(0.745)
ERISA class action	0.637	0.613	0.600
	(0.740)	(0.688)	(0.743)
Observations 407			

Standard errors clustered on the district office in parentheses
* significant at 10%;
** significant at 5%;
*** significant at 1%

Table 4: Marginal effects of trial deadlines, various measures

	(1)	(2)	(3)
Percent lodestar*months to trial	-.0063036		
Months to trial	.0035016		
Percent lodestar*6 months or less to trial		.2365787	
Percent lodestar*12 months or less to trial		-.2460232	
6 months or less to trial		-.1025512	
12 months or less to trial		.0279337	
Percent lodestar*months to trial (truncated at trial date)			-.0054232
Months to trial (truncated at trial date)			.003109

Figure 1: Top, Kaplan-Meier Empirical Hazard, Bottom Distribution of Settlement Times



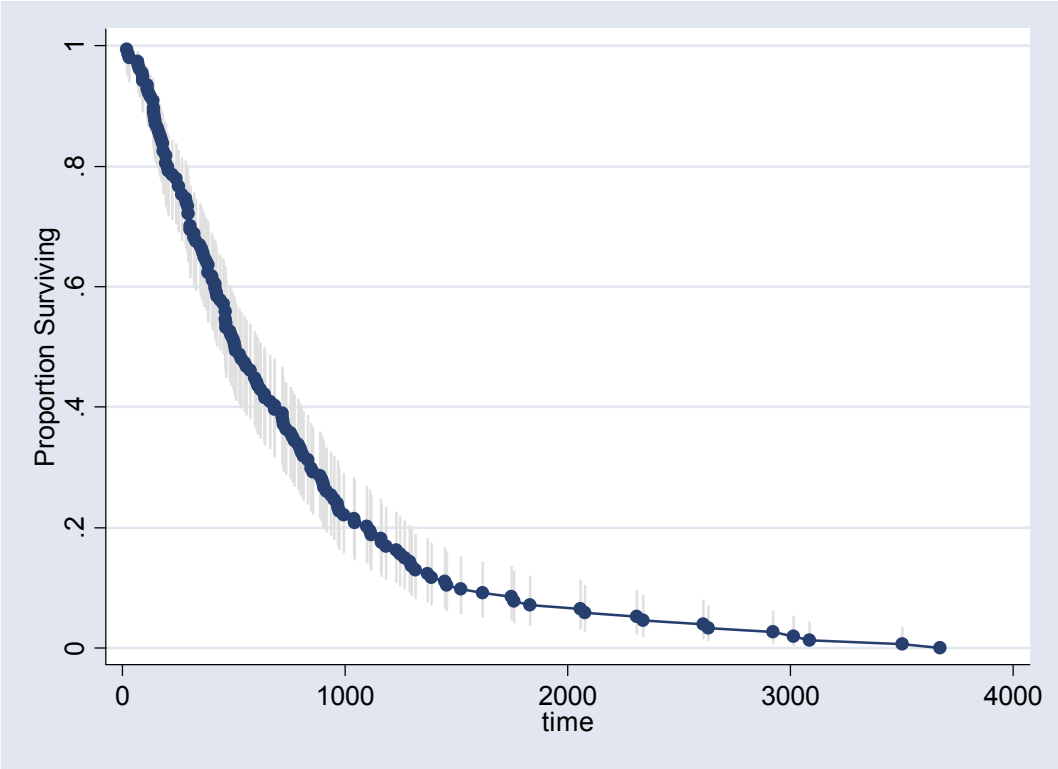


Figure 2: Predicted Discrete Hazard Rates