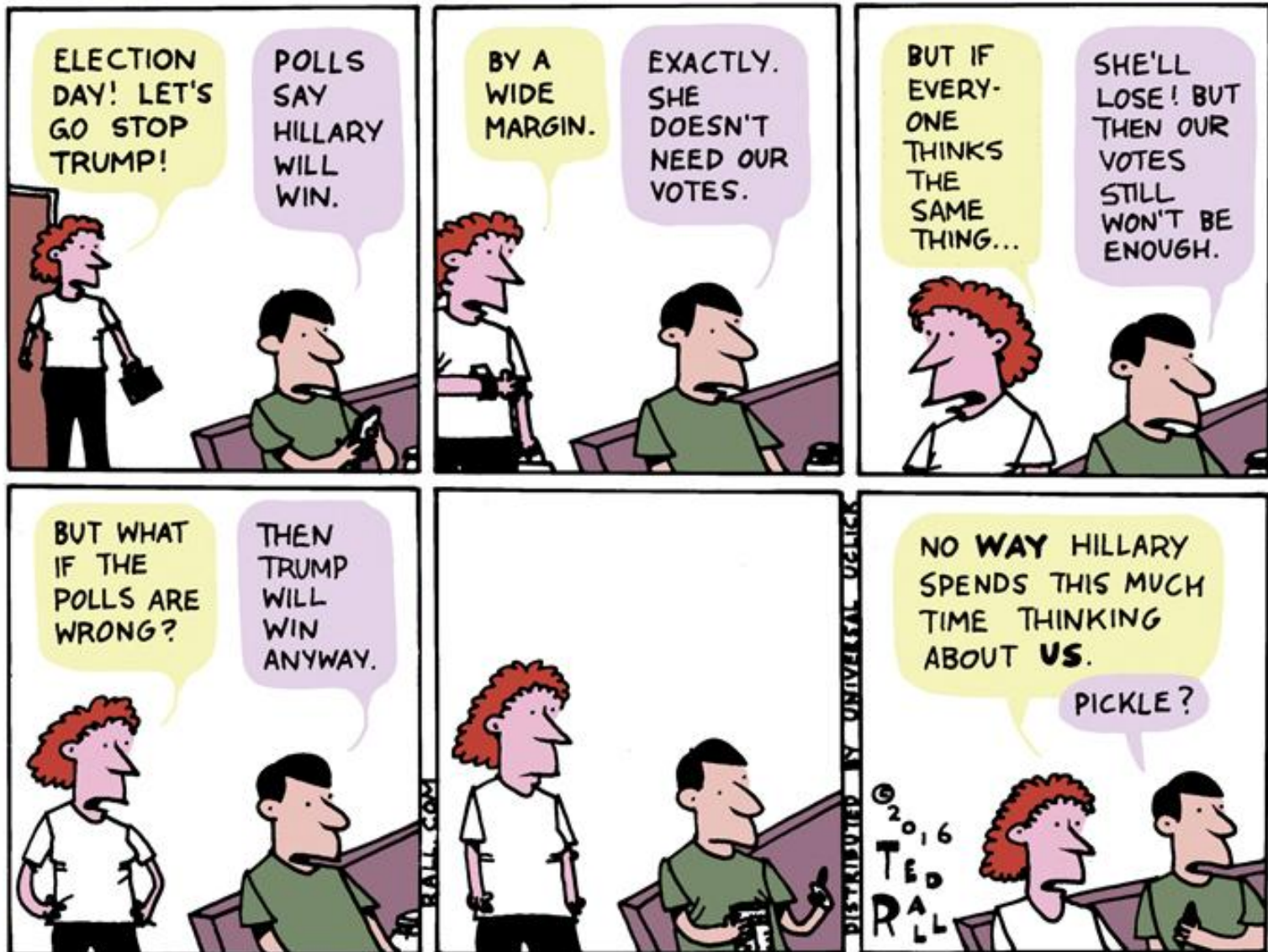# Free-riders and Underdogs: Participation in Corporate Voting

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The Paradox of Voting

CGZ: Free-riders and Underdogs

Rational Choice model of corporate voting.

In equilibrium, supporters of the front-runner tend to free-rider off other supporters and stay home.

Dissenters gang up in an effort to overturn the front runner's advantage.

This induces a mis-alignment of actual votes vs. underlying population preferences where more of the dissenters show up to vote and fewer of the supporters bother to do so.

All of this is the same as in the political voting model of Myatt (2015).

Voting Paradox and Rational Choice Theory

The main issue irking rational choice theory is explaining why people vote at all is that it is costly to vote, and that expected benefit is vanishingly small in a large electorate. Paraphrasing Downs (1957), a necessary condition for voting is:

$$EXPECTED\ BENEFIT > COST$$

$$p.B \qquad > C$$

Where **C** is the cost incurred by the voter to vote, **B** is the incremental utility gain from her favored candidate winning, and **p** is the probability that her vote is pivotal. Clearly **B** needs to be greater than **C** to make voting possible (since **p** is strictly less than 1).

Voting Paradox and Rational Choice Theory

The problem is that even if **B** is material, **p** gets vanishingly small as the size of the electorate increases, making the expected benefit of voting close to zero.

And yet voting turnout in political elections is far from zero.

Indeed, the existential problem for **Rational Choice** models is to explain high turnouts in elections. Voters show up in rain, stand in lines for hours, even face physical violence simply to cast their votes. Clearly something is amiss in Rational Choice models.

This is especially true if there is uncertainty about the actual number of voters in support of particular candidates. If so, the probability of being pivotal approaches zero (see Feddersen, 2004).

Voter Paradox

Arrow (1969) who said that it is "hard to explain . . . why an individual votes at all in a large election, since the probability that his vote will be decisive is so negligible"

Aldrich (1997) wryly noted "the rationality of voting is the Achilles' heel of rational choice theory in political science".

Goodin and Roberts (1975) advised that "the politically rational thing to do is to conserve on shoe leather."

Myatt (2015)

Not so quick, says Myatt (2015). He comes to the defense of RCT by introducing

... aggregate uncertainty about the popularity of each candidate

And is able to explain

"substantial turnout" under "reasonable conditions."

In particular, Myatt shows that in mid-level populations (ball park 100,000), the probability of a vote being pivotal can be as high as 1 in 2500 because of the asymmetric incentives facing supporters and dissenters in the population.

This is because supporters of the leading candidate tend to free-ride their cohort, staying home in the face of costly voting.

By contrast, dissenters are perfectly willing to take on long odds in the slim hope that their collective turnout may overturn the popular support.

Myatt (2015)

Expected Turnout Rate =

$$\frac{\text{Instrumental Benefit/Voting Cost}}{\text{Population x Width of 95\% Confidence Interval}}$$

So to explain a 70% turnout in an election where the leading candidate expects to get between 58% and 63% of the votes in a population of 1 million, we need the following

Instrumental benefits / voting costs = 0.7 x 1,000,000 x 0.05

= 35,000

Is this reasonable? The instrumental benefits would need to be 35,000 times the cost of voting.

Voting as a Social Act

Myatt (2015) does not tell us exactly why the underdog supporters are willing to take on long odds when the chance of overturning a popular candidacy is minuscule. He speculates that this could be because the underdog supporters have social preferences and shows that even very mild social preferences can lead to large expected benefits and that this effect increases in the population size.

So far so good, but why deny the same social conscience to the free-riding supporters of the popular candidate? Invoking social preferences seems a little desperate to rescue Rational Choice theory.

Corporate Democracy

The biggest issue we have here is the extrapolation from political voting to corporate voting. Are there substantive differences?

First, the one person one vote rule is no longer applicable in corporate voting. Investors get more votes by holding more shares. An investor's fixed cost of voting declines with her holding size.

Say the cost of voting per share is C. The total cost of voting for an investor who holds N shares is therefore

$C.N = C_F + C_V.N$

The variable cost is close to zero, since voting is electronic.

➔ $C \approx C_F/N$

This has implications for how one interprets Bayesian Nash Equilibria in mixed strategies. We will come to that.

Calibrating Block Votes

The authors note this feature of corporate democracy and do some back of the envelope calibration to estimate the benefit to cost ratio for a typical block holding.

Assuming that the average block size is $1.5 million, they state that the "return" (presumably from voting) is 1.3%.

I am not sure what this means since no mention is made of how such a return was arrived at, or even exactly what it represents other than the assertion that the return is comparable to price impact of certain shareholder votes.

All we can say with any degree of confidence is that the cost to benefit ratio for corporate voters will decline in the size of their holdings. This is just the math of fixed costs.

Cost of voting and investor holdings

The cost of voting also shows a time trend.
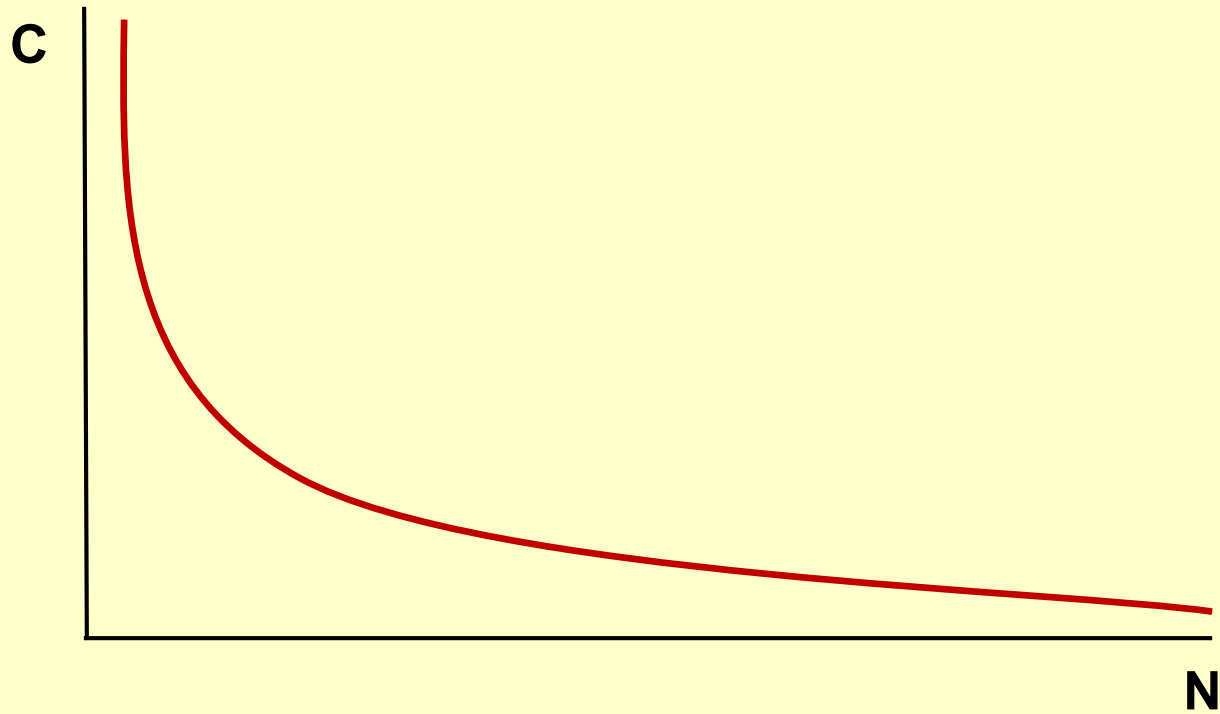
Comparative Statics

Instead of explaining the decision to vote, perhaps we can reach firmer ground when dealing with the partial derivatives.

One suggestion is to more fully exploit the heterogeneity in ownership. This can be done in many ways, depending on what the purpose is. For e.g., founder dummies can be used to examine voting patterns based on agreement with the controlling family. Older founders who overstay their welcome ought to be tagged further.

Indeed, based on the information in the tables, it seems there are several cases where the dominant shareholder has sufficient votes to make discretionary voting nothing more than symbolic. For e.g. in table 4, the max value for y is 0.59. This would imply a maximum support (q) of 0.85, assuming zero support among discretionary voters. Is this inequality respected in the data?

The CGZ study

In the CGZ study, the key distinction from Myatt (2015) is the inclusion of a group of voters who are non-discretionary. Sort of like the liquidity traders in Admati and Pfleiderer.

What does the non-discretionary voter bring to the defense of the rational choice theory?

First off, the voting preference of the non-discretionary voter is well known to everyone. This generates some perverse incentives. If you are a discretionary voter, and agree with the non-discretionary voter, you may decide to "free ride" in the face of costly voting. If on the other hand you favor the underdog, you get *somehow* energized to turn out in droves to offset the popular advantage of the front-runner. Why don't underdog supporters also free-ride their own cohort? What coordinating mechanism ensures they respond in a manner predicted by the BNE equilibrium?

A Few Quibbles

Quibbles – #1

Total participation = y (1) + (1 – y).discretionary participation

where *y* is the fraction of mandatory voters.

Based on the above, we can back out y for various proposal and sponsor types. When we do this in Table 3, we get some odd results.

Take for instance CSR proposals where Discretionary Participation > Total Participation.

Assuming *y is ≥ 0,* this can only happen if non-discretionary voters are abstaining. That introduces another element of uncertainty in the game and we don't know how it affects the equilibria.

Table 2 Panel B

Max values for N-PX as well as Management ownership exceed 50%. Assuming, at least for the latter, monolithic preferences, why are these observations in the sample? Is there any discretionary turnout in these cases?

The paper claims that a novel contribution vis-à-vis Myatt (2015) is the introduction of regular voters who always vote. I think Myatt anticipated that. See for e.g. Myatt (2015) pp. 5

The model also extends straightforwardly to allow for a (uncertain) probability that some voters always vote.

Very Minor Quibble

The authors note that (pp. 33):

In addition, the concentrated nature of shareholders meetings (in spring in the US, on 2 days annually for the entire Japanese population of public firms) provides challenges especially for small, but diversified asset managers.

The tendency of Japanese AGMs to congregate on a couple of days is rapidly changing for a variety of reasons, in part because of the waning influence of organized crime in corporate extortion. There is still some advantage for firms to hide in a throng, but good firms have an incentive, and the opportunity, to break free. AGMs dates are therefore more dispersed today.

And a Few Suggestions

Table 2 Panel C

Arguably disagreement is more likely when the firm is not well governed. A firm's q-ratio is a good reflection of this condition.

In Table 2 Panel B, you have Q ratios with a range of 0.38 to 26.82. Examining turnout rates for discretionary voters based on Q-bins may shed more light on how the underdog effect works.

Misalignment resulting from selection effects

Are the associated stock returns different? Esp in the minority of cases where the popular position in overturned?

Mixed Strategy Interpretation

How is the mixed strategy equilibrium interpreted in the context of institutional voting?

Does it signify distribution of pure choices in the population? Or is the randomization based on some unobserved private signal that each player receives, and then acts based on that signal?

Rubinstein (1991) wrote an excellent piece on the difficulties associated with the interpretation of mixed strategy equilibria. Turns out these are not easily rendered without coordination help that is almost certainly beyond the model. This is not a criticism specifically of this paper but applies more generally. After all, one doesn't see investors making decisions with a random number generator in their hands.

Mixed Strategy

Perhaps what the model has in mind is the adoption of a pure strategy by each agent of a faction, with the proportion of agents adopting a pure strategy is fixed in equilibrium. This is equivalent to the above, but still requires a coordinator.

The above is wat Rubinstein calls a purification idea. "A player's mixed strategy is thought of as a plan of action which is dependent on private information which is not specified in the model. Although the player's behavior appears to be random, it is actually deterministic. If we add this information structure to the model, the mixed strategy becomes a pure strategy in which the action depends on the extraneous information."

But what exactly is the nature of this extraneous information? If this is payoff irrelevant, it should be ignored by the players. If it is payoff relevant, the model is incomplete. There seems no easy way to play a mixed strategy game.

Rubinestein (1991) on the Interpretation of Mixed Strategies

Mixed strategy can alternatively be viewed as the belief held by all other players concerning a player's actions. A mixed strategy equilibrium is then an n-tuple of common knowledge expectations, which has the property that all the actions to which a strictly positive probability is assigned are optimal, given the beliefs. A player's behavior may be perceived by all the other players as the outcome of a random device even though this is not the case.

Adopting this interpretation requires the reassessment of much of applied game theory. In particular, it implies that an equilibrium does not lead to a prediction (statistical or otherwise) of the players' behavior. Any player i's action which is a best response given his expectation about the other players' behavior (the other n - 1 strategies) is consistent as a prediction for i's action (this might include actions which are outside the support of the mixed strategy). This renders meaningless any comparative statics or welfare analysis of the mixed strategy equilibrium and brings into question the enormous economic literature which utilizes mixed strategy equilibrium.

Dogs that didn't bark…

I am also most intrigued by the robustness checks where the authors appear to take solace in noting the consistency of their results.

For e.g., bottom of section 5.3,

"*Despite the trend in the benefit to cost ratio, selection-related estimates do not exhibit any meaningful time trends.*"

Given that the benefit to cost ratio is absolutely critical in the turnout equation, I was puzzled to see that selection was unresponsive to such a material trend.

Similarly, in section 7.3, Ownership structure appears not to matter for equilibrium turnouts. Some explanation is needed to explain the reticence. Ditto for the importance of information – early vs. late season voting patterns show little difference.

Conflicts of Interest

How is conflict of interest between investment advisers and the firm handled in voting decisions, including whether or not to vote?

Under the Duty of Care, the SEC allows investment advisers to refrain from voting if that is in the best interest of the client. Moreover, conflict of interest can be resolved by multiple means, including a pre-commitment to vote based on third party advice.

How do these hard-wired voting and selection into voting decisions play into the model?

It seems that mandatory voting is largely based on the Duty of Care, and hence largely imposed on agent advisers. By contrast, principals (Hedge Funds, Family Trusts) are under no such obligation to vote. Private wealth managers appear to be bracketed with the principals.
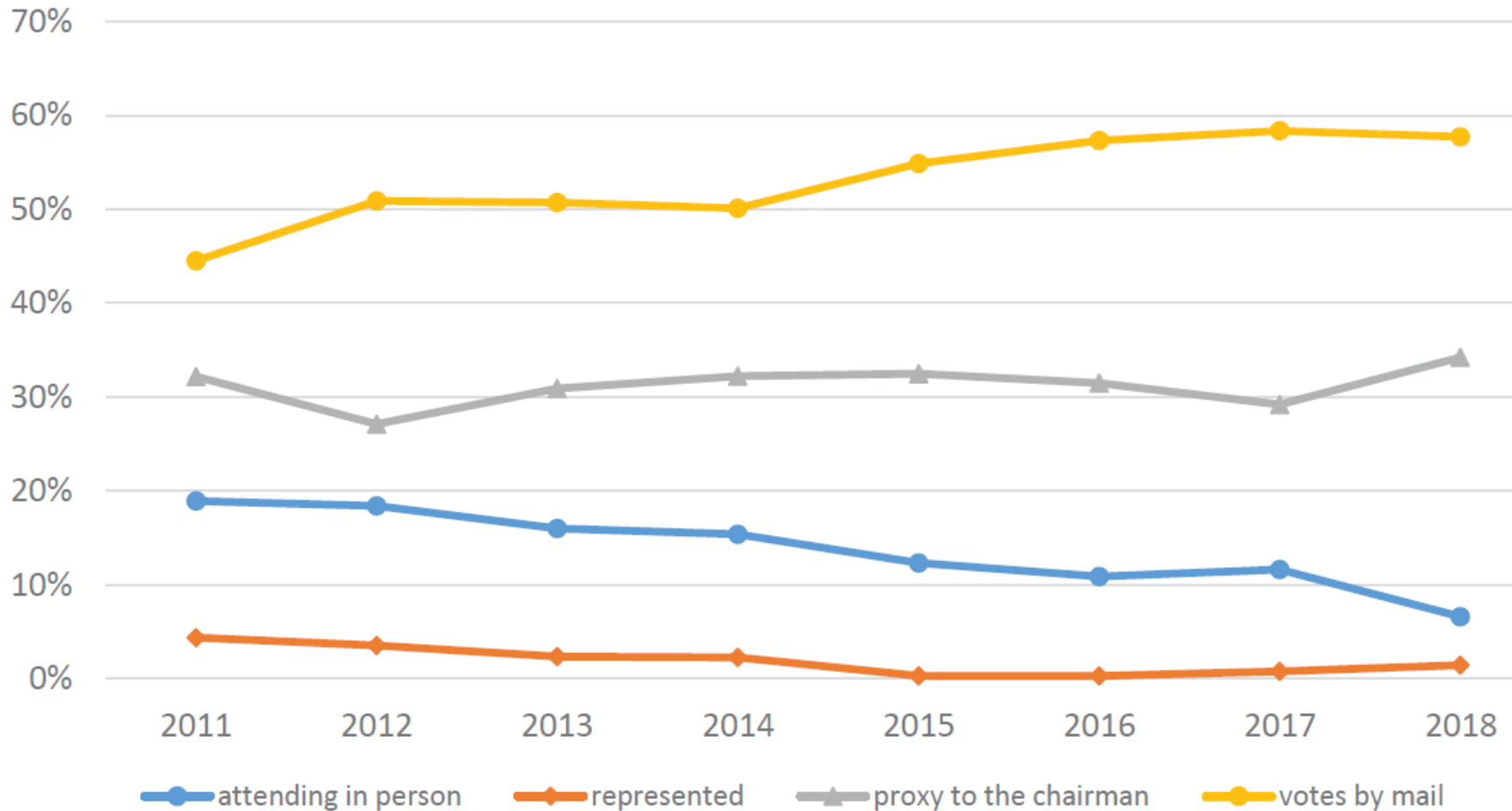
Extensions

The Shareholder Rights Directives in the E.U. have lowered voting costs in many ways for E.U. firms. Has this affected voting turnouts?

Here's some preliminary evidence from Van der Elst (2019).

Van der Elst (2019)

Participating modes of the shareholders

attending in person — represented — proxy to the chairman — votes by mail

Thank you!