

Reflections on the EU Referendum Polls

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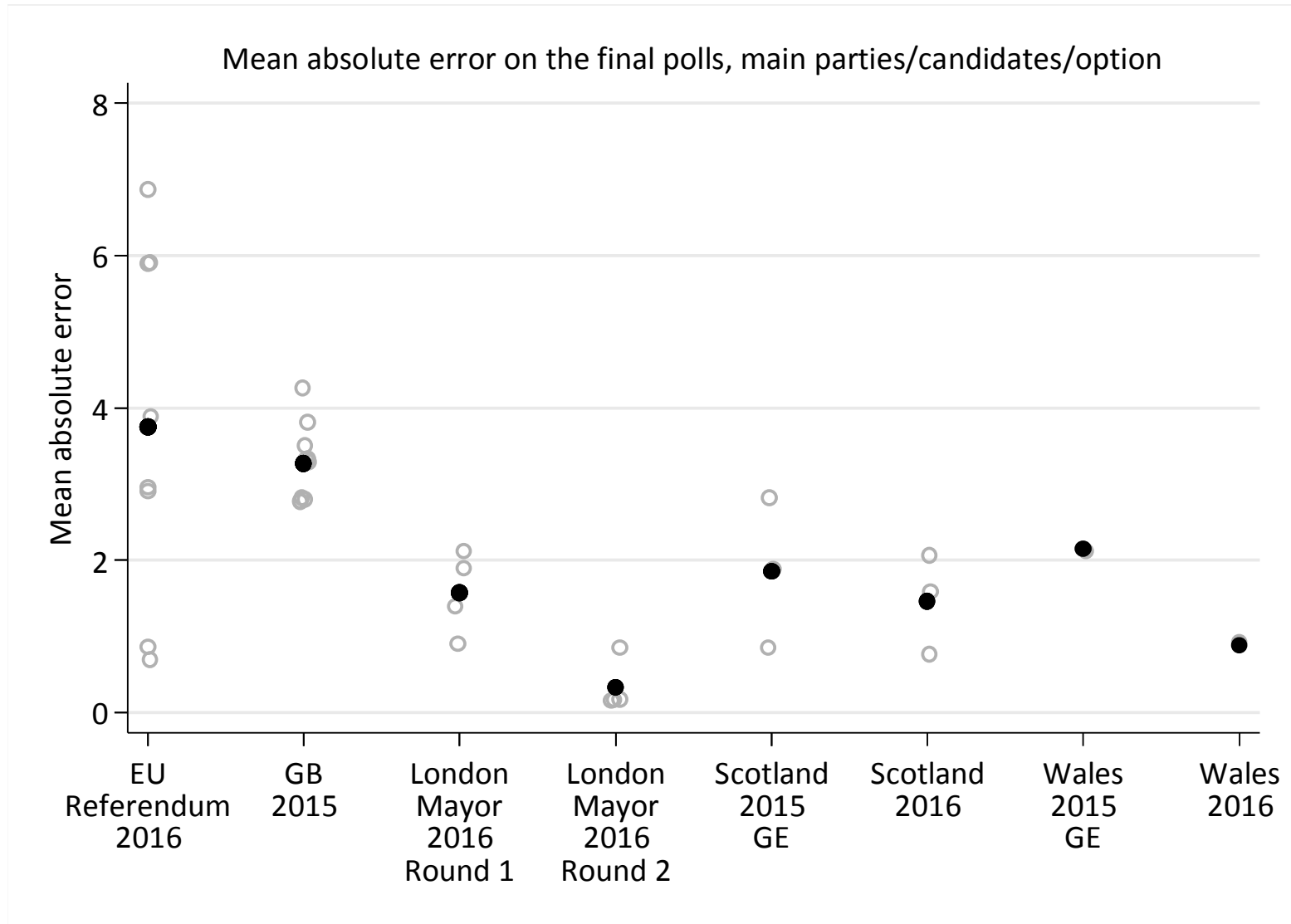
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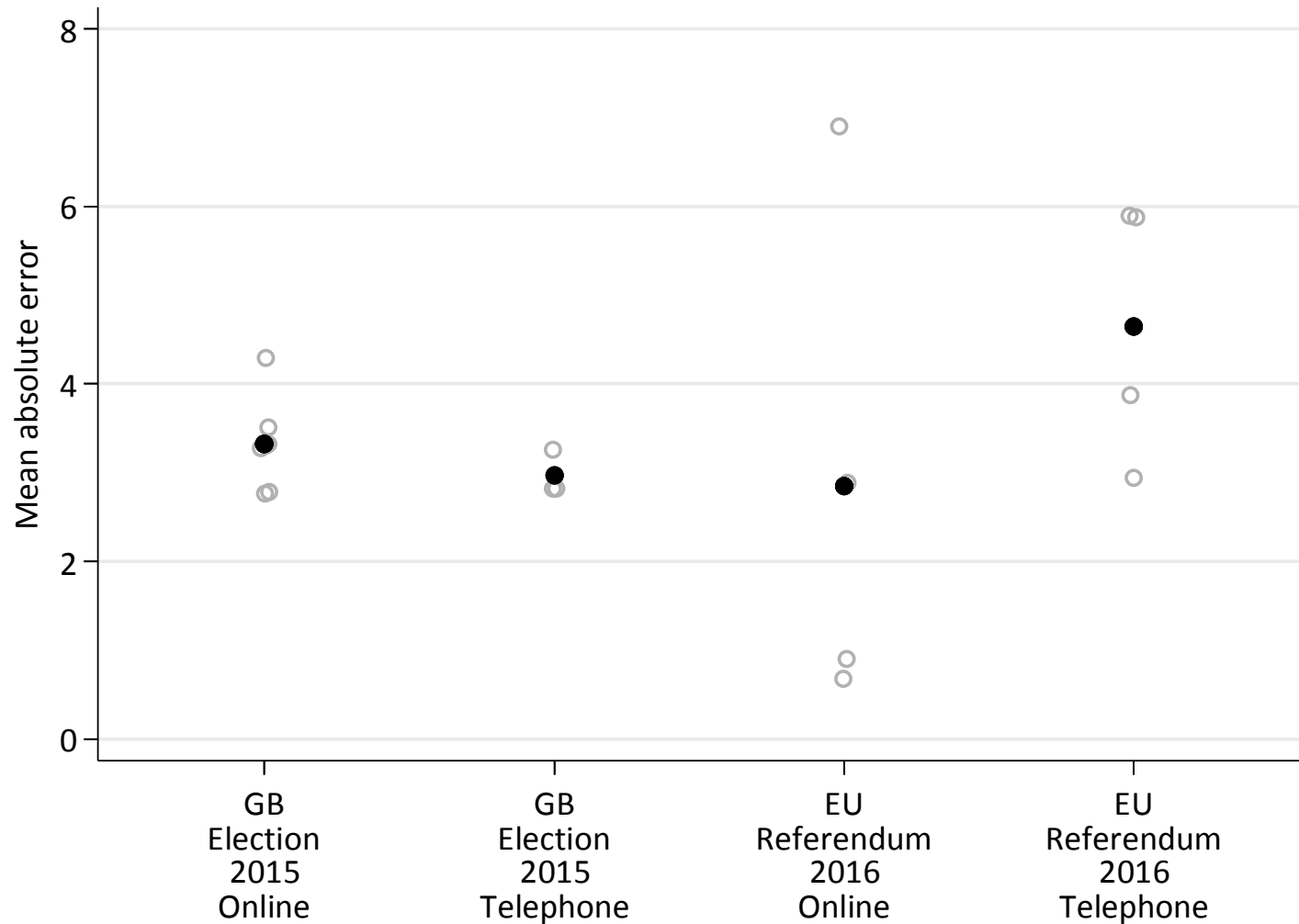
Outline

1. How did the final polls perform? Are polling errors getting bigger (everywhere)?
2. How and when did pollsters adjust their methods?
3. How did this impact on accuracy of the polls?
4. What have we learnt (and not yet learnt) after the 2015 election and Brexit?

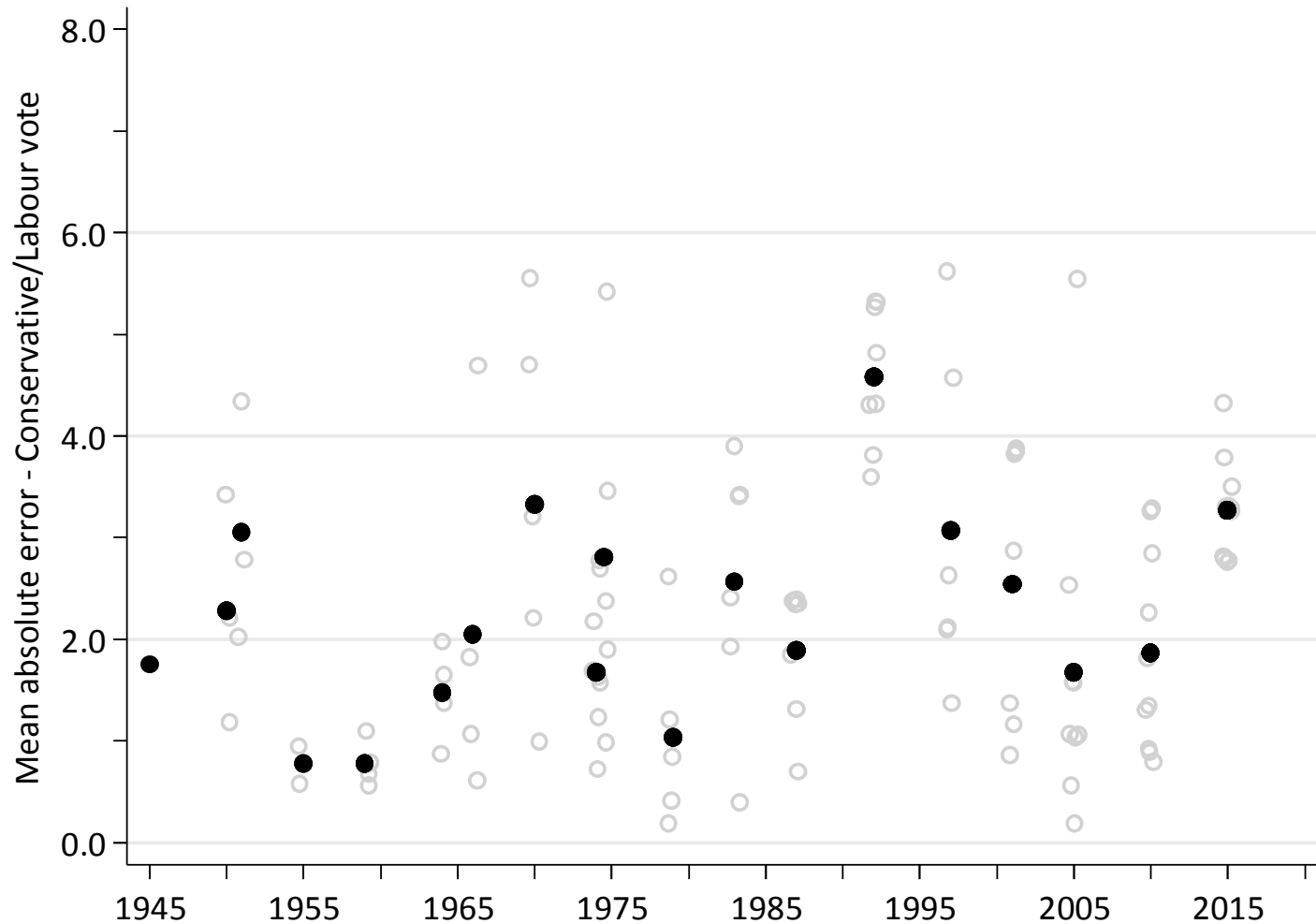
Polling errors in the UK, 2015-16



Polling errors, mode differences?



Polling errors in the UK, 1945-2015

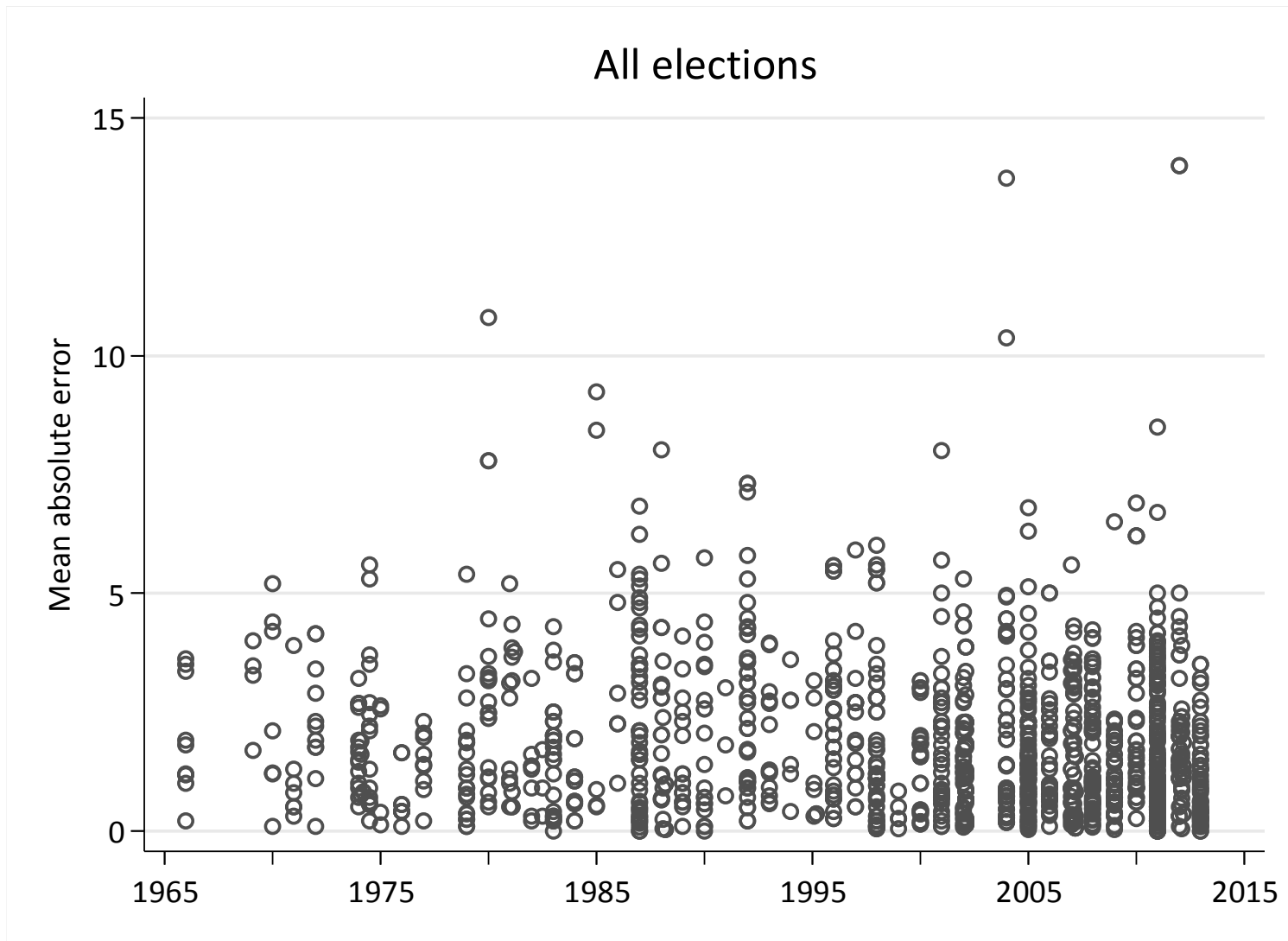


Are polling errors getting bigger?

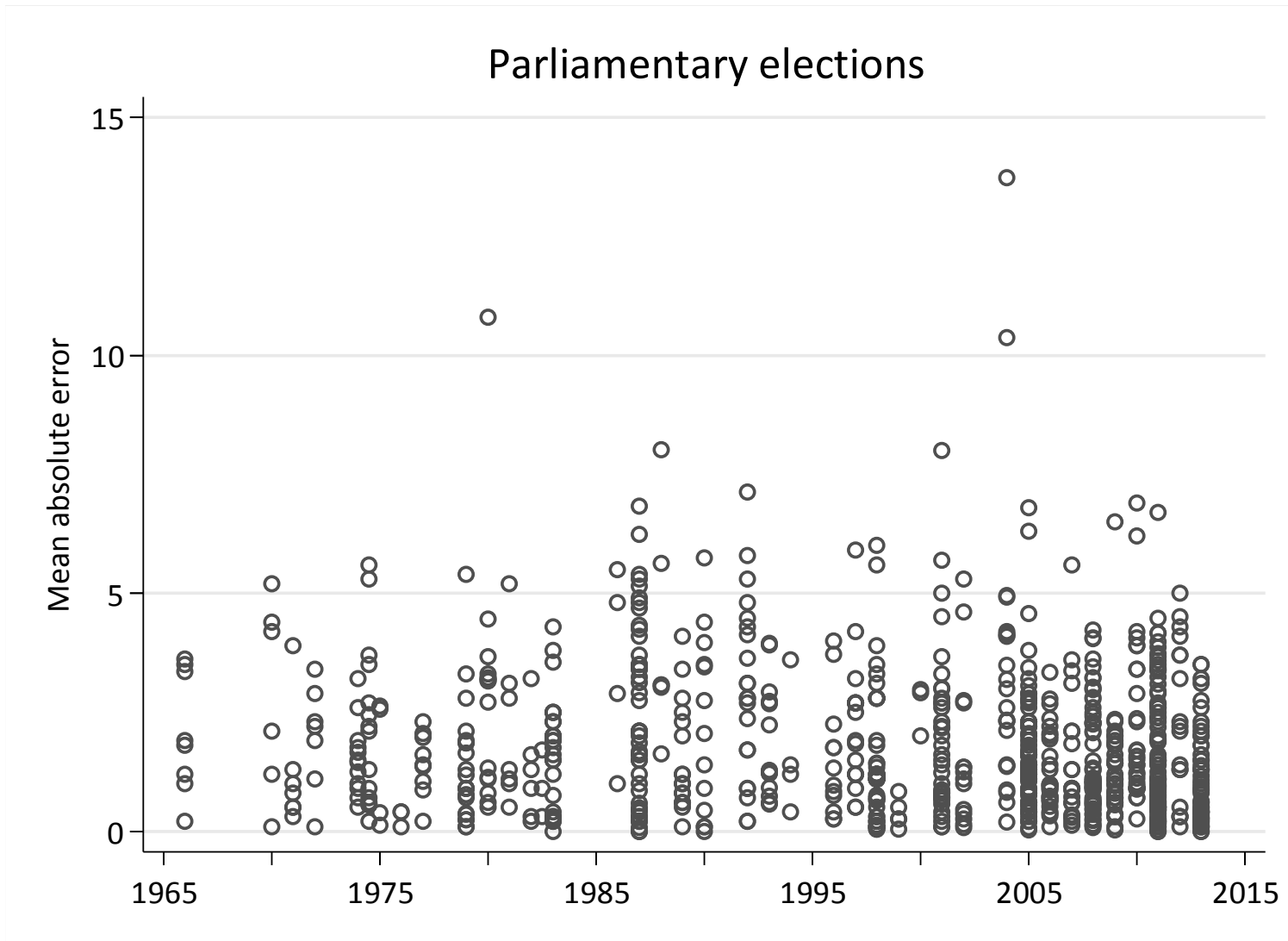
Analysis of data for 13 countries 1960s to 2010s

- Australia, Canada, France, Germany, Ireland, Netherlands, New Zealand, Norway, Portugal, Spain, UK, US, Denmark.
- *Mean absolute error* of the daily poll-of-polls, for all parties/candidates for every day of final week of election campaign.

Are polling errors getting bigger?



Are polling errors getting bigger?

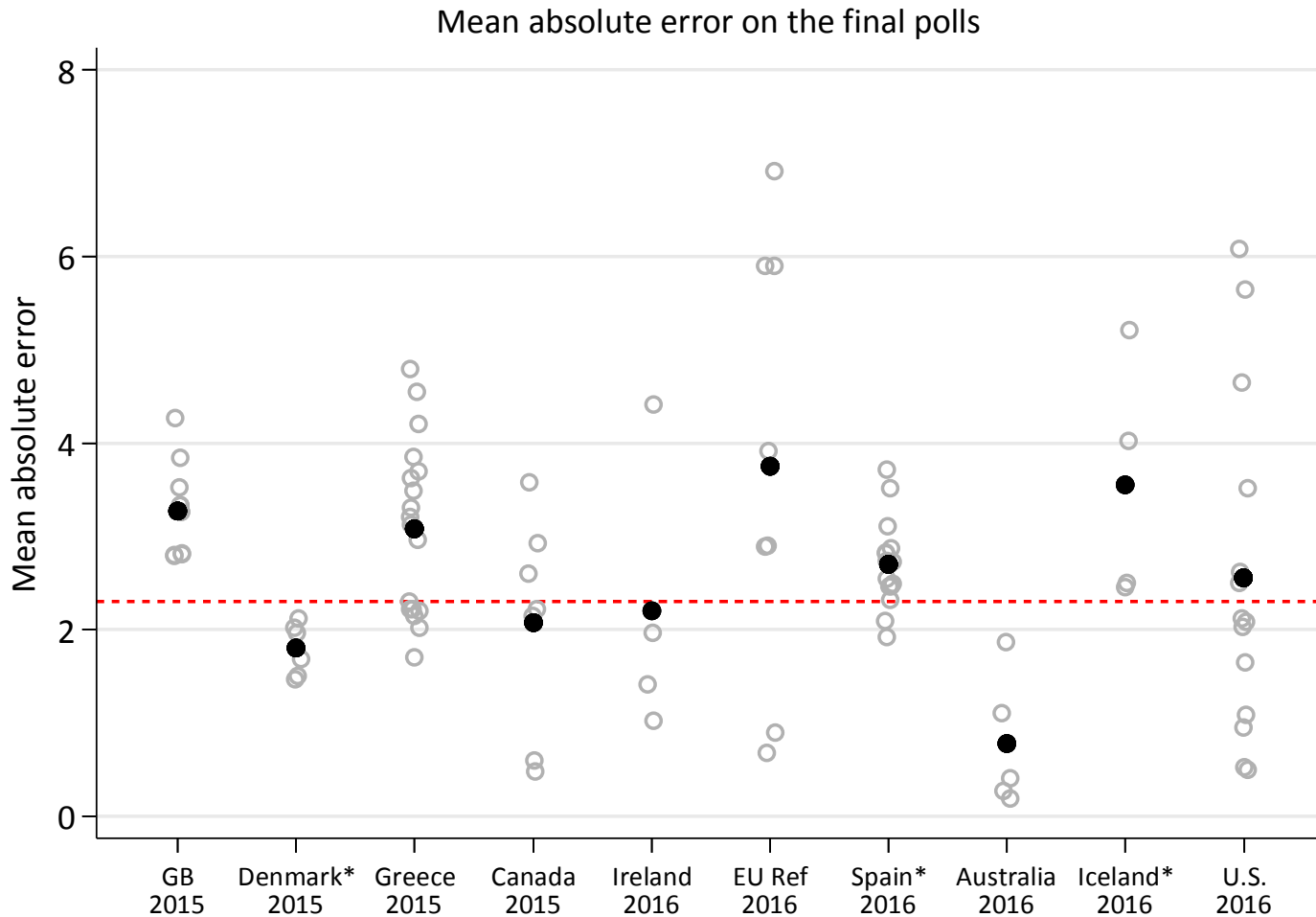


Are polling errors getting bigger?

Analysis of 8 national elections in 2015-16:

- Greece, Spain, Denmark, Ireland, Iceland, US, Canada, Australia.
- *Average mean absolute error of all final polls for the main parties (i.e. including smaller parties reduces MAE due to sampling error being a function of the vote share – and even this comparison is not perfect).*

Polling errors worldwide, 2015-16



2.3 = the average MAE of polls for 'large parties' (>20% vote share) in 139 elections in 23 countries (from Jennings & Wlezien 2016).

2.7 = the average MAE of polls in this 2015-16 set of elections

* In multi-party systems where polls for >2 parties overlap, average MAE is for 3 parties.

Anchoring bias? Shaping narratives

Is what really matters getting the story right?

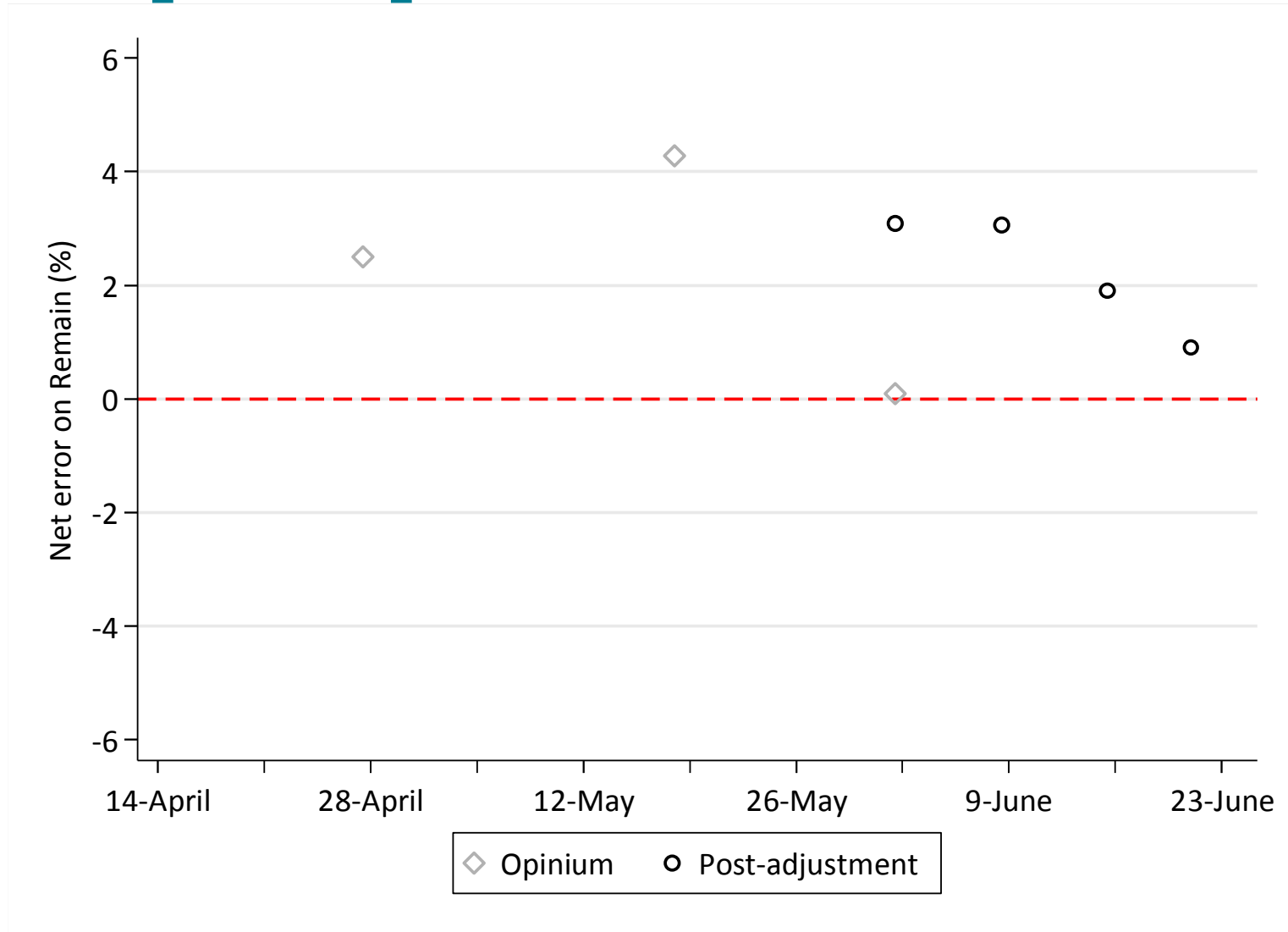
- Polls regularly showed Leave ahead (should really have been seen as a coin-flip?)
- National polls in 2016 US presidential election were less wrong than 2012.
- In knife-edge elections, polling error can be small but get the result wrong. How communicate that?

Pollster adjustments (7 out of 8)

	Date	Change	Reported effect
ORB	14-19 June*	Only those who indicate they are definite to vote; <i>Assume DKs break 3:1 to Remain</i>	+2 Remain, -2 Leave
Survation	n/a		
ComRes	17-22 June*	DKs reallocated on economy question; Target population includes Northern Ireland (UK not GB)	+1 Remain, -1 Leave
Opinium	31 May - 3 June	Weighting targets include attitudinal questions (via BES)	+3 Remain, -3 Leave (31 May-3 June poll)
YouGov	20-22 June*	Target population includes NI (UK not GB); weighted by reported probability of voting.	+1 Remain, -1 Leave
Ipsos MORI	21-22 June*	Only those included for whom outcome of the referendum is very or fairly important	+1 Remain, -1 Leave
Populus	21-22 June*	Adjusted for demographic propensity to vote plus underlying attitudes of those likely to vote but not state a voting intention.	+3 Remain, -3 Leave
TNS	16-22 June*	Not weighted by estimated likelihood to vote (in contrast to previous two polls)	+3 Remain, -3 Leave

*Adjustment to final poll.

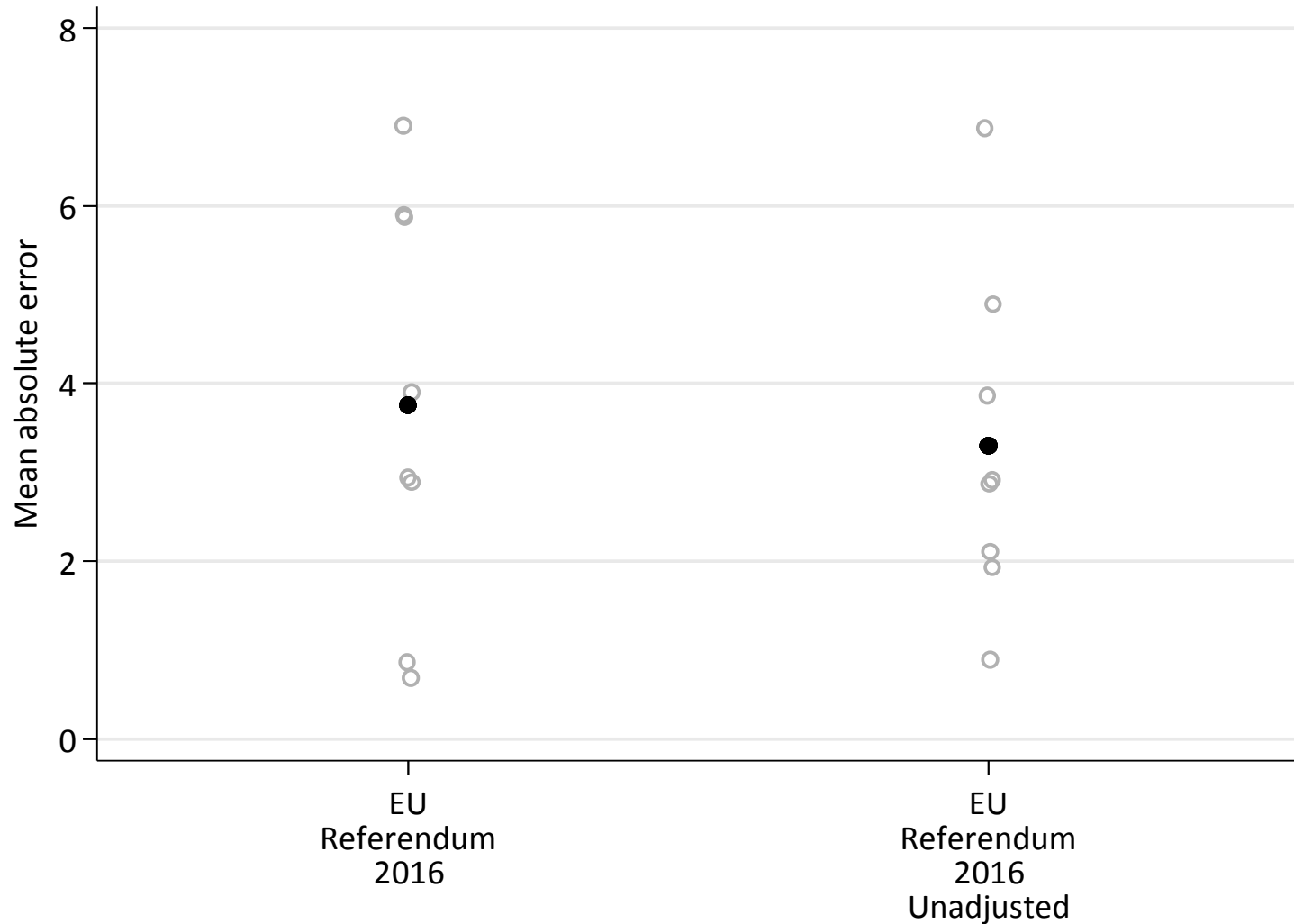
Example: Opium



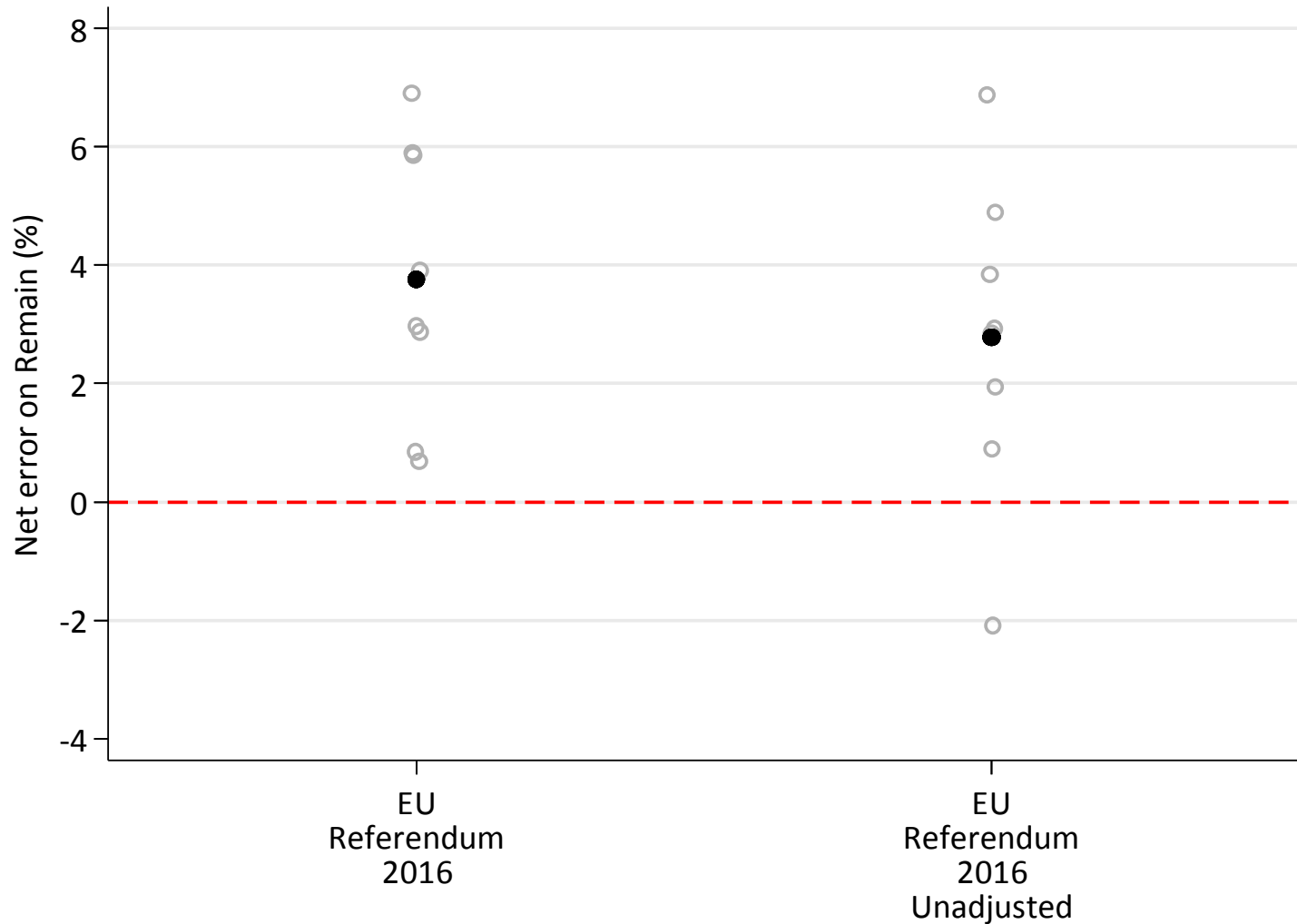
Expectation bias?

- Ahead of the EU referendum, much discussion of ‘status quo bias’ of past votes.
- After the 2015 election polling miss, random probability (‘gold standard’) surveys noted as getting closer to the final result. Over course of referendum campaign, random probability surveys (by NatCen and others) pointed to a Remain win. Did this influence expectations?

Expectation bias?



Expectation bias?



Summary

1. A different, not better, story than May 2015 (errors more spread, but larger).
2. Adjustments to final polls *increased* error.
3. Possibility of systematic bias again under-appreciated (communication vs. media?).
4. Is there a problem of endogeneity of *forecasts* and poll errors (i.e. forecasting models/rules-of-thumb and methodological adjustments)?

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