

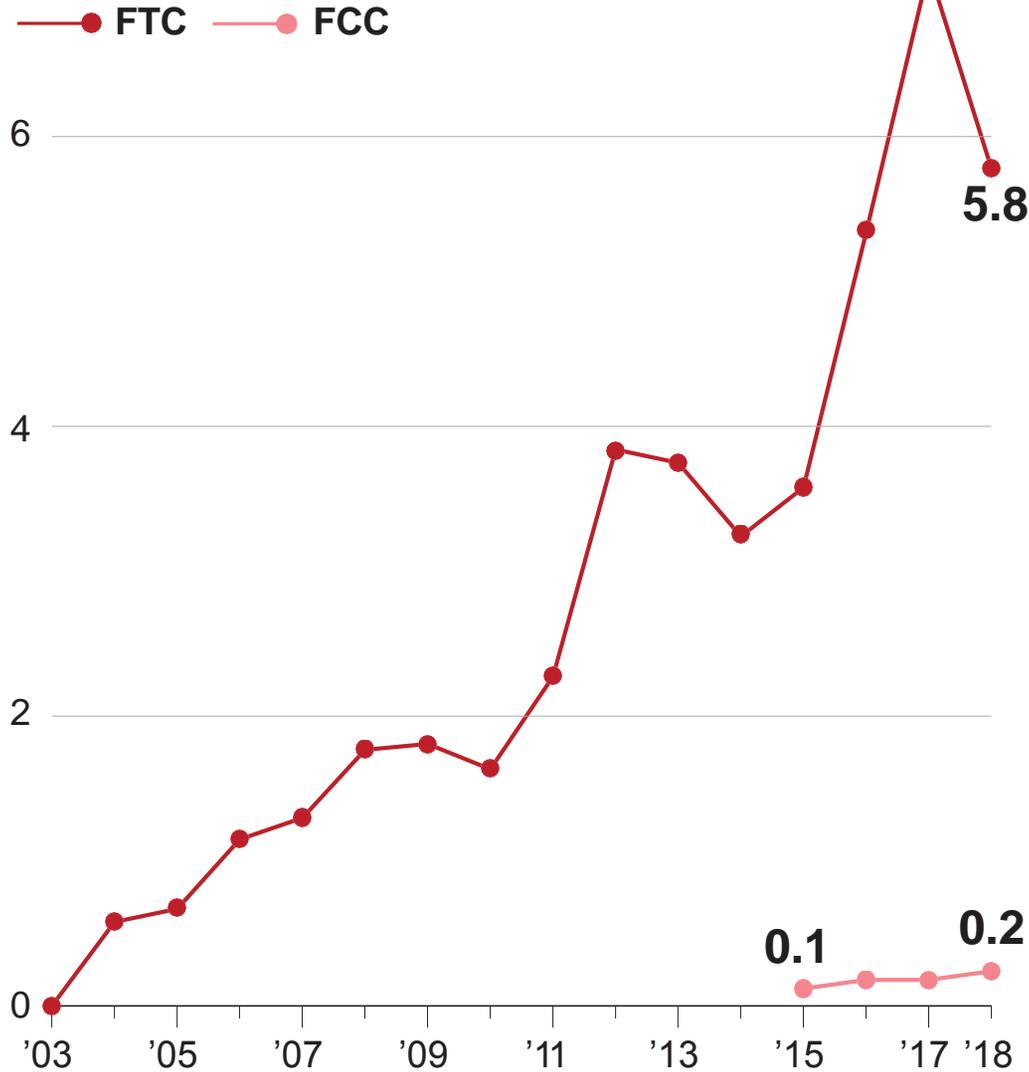
FCC and Congress Step Up Efforts to Combat Spam and Robocalls

Robocalls are attracting increased scrutiny from Congress as complaints of unwanted phone calls reported to both the FCC and the FTC, via its Do Not Call Registry, have surged in recent years. Both agencies rely on their complaint data to inform policy and enforcement decisions, but warn that complaint numbers are likely underreported and may be lower than the actual volume of robocalls and other unwanted spam calls.

Sources: FTC Do Not Call data books, FCC Report on Robocalls CG Docket No. 17-59, FCC Consumer Complaints Data, Federal Register, Senate Commerce Committee, POLITICO Pro Legislative Compass

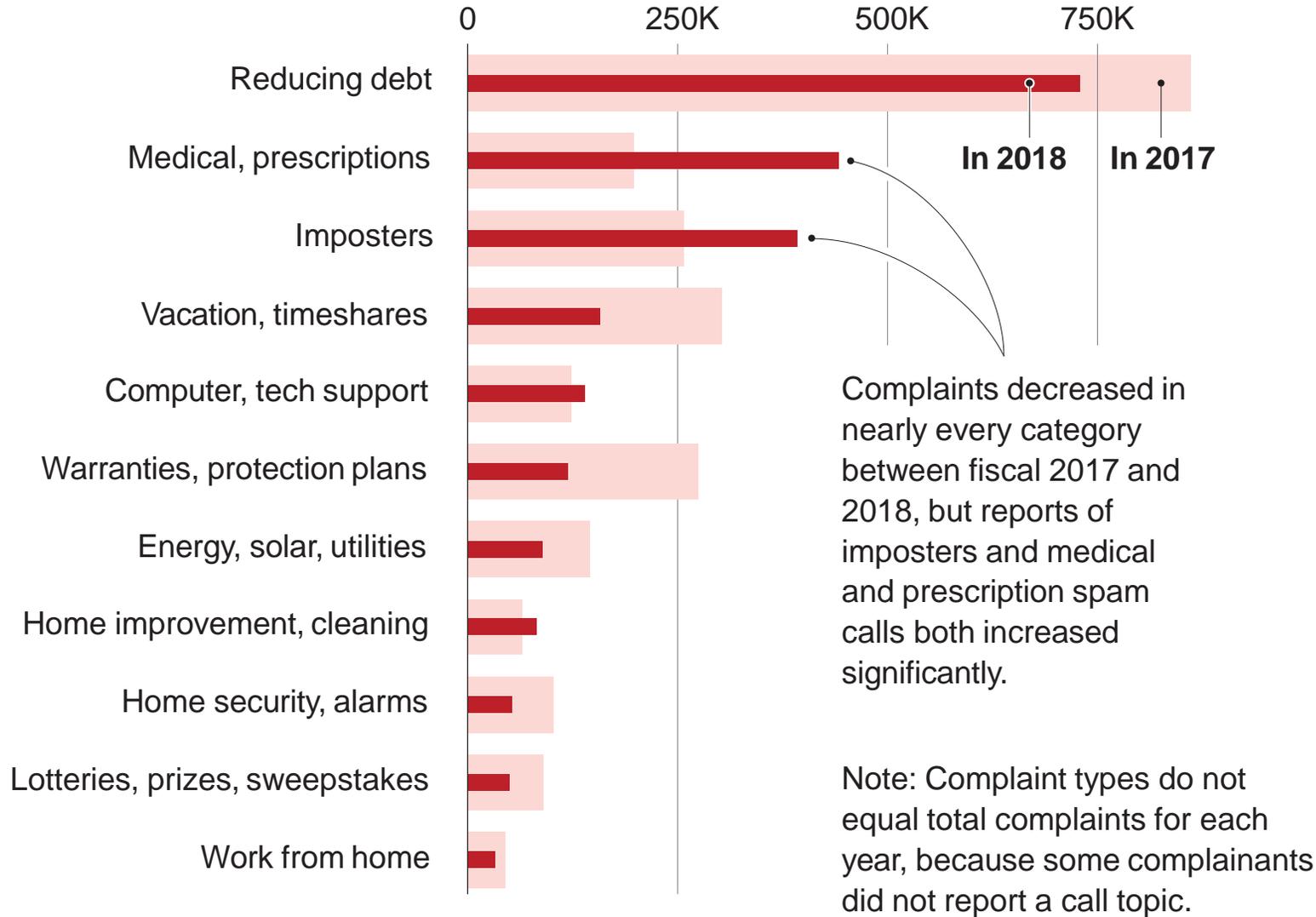
Number of consumer complaints of unwanted calls filed annually with the FTC and FCC

IN MILLIONS, FISCAL 2003 TO 2018



Complaints filed with the FTC, by call topic

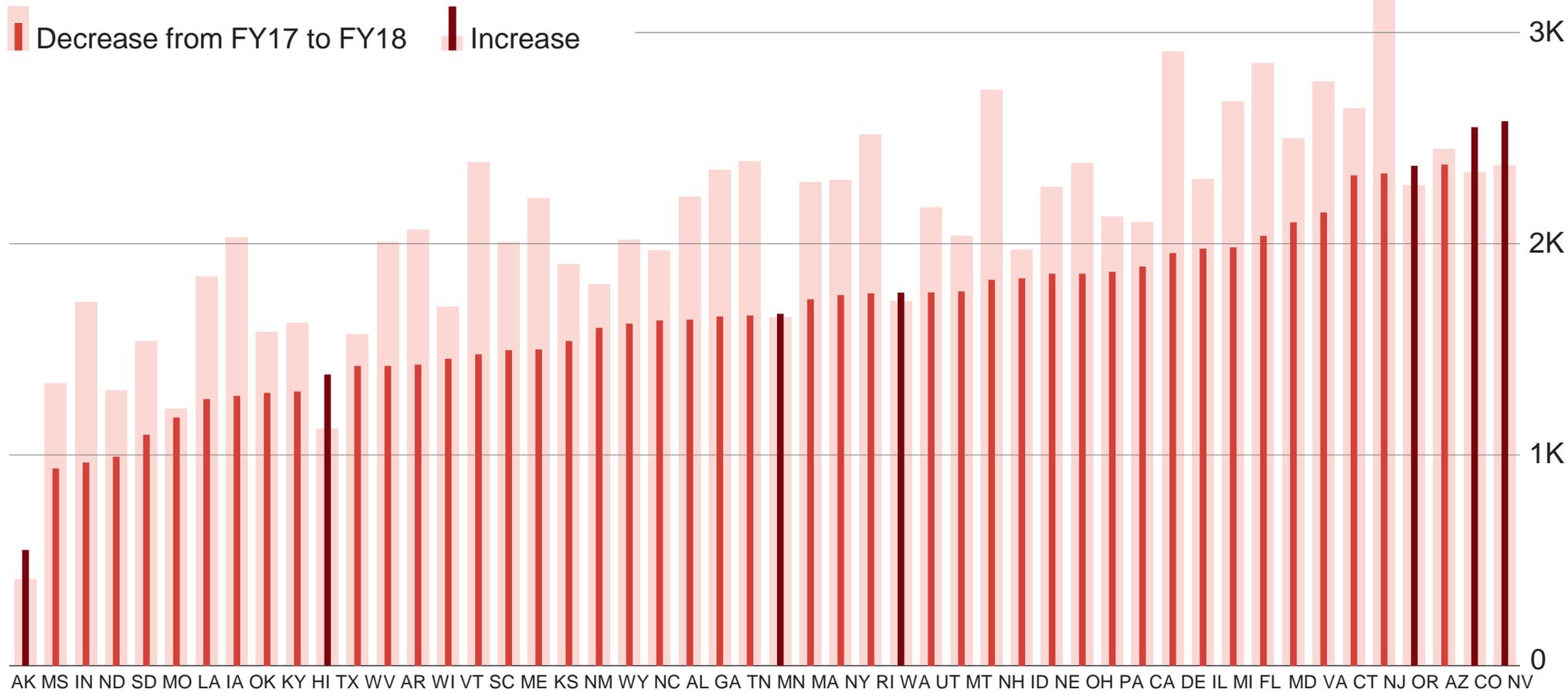
FISCAL 2017-18



Reported complaints for unwanted calls decreased in all but seven states from fiscal 2017 to 2018

Annual per capita rate of Do Not Call complaints filed with the FTC in fiscal 2017 and 2018

COMPLAINTS PER 100,000 POPULATION



Timeline: Recent FCC actions to address volume of unwanted phone calls



KEY DATES:

Sept. 30, 2016

The FCC clarified that the Communications Act does not prohibit consumers from using third-party blocking apps.

Note: This timeline does not include FCC or FTC enforcement actions taken against companies and telemarketers.

July 13, 2017

The FCC began accepting comments on how to reduce unwanted calls to numbers reassigned to a new customer and, separately, on how to advance industry efforts to improve caller ID authentication.

Nov. 16, 2017

The FCC authorized voice service providers to block Do Not Originate calls, as well as originating numbers that are invalid, unallocated or unused.

March 22, 2018

The FCC proposed creating one or more databases to provide callers with potential number reassignments before making a call.

May 14, 2018

FCC Chairman Ajit Pai accepted the working group recommendations for industry leaders to choose an authority to coordinate implementing the SHAKEN/STIR framework, an industry standard for cryptographic authentication of phone calls, designed to prevent spoofed calls.

Nov. 5, 2018

Pai sent a letter calling for phone service providers to implement the SHAKEN/STIR framework by the end of 2019.

Dec. 12, 2018

The FCC clarified that wireless providers may prevent unwanted text messages with robocall-blocking, anti-spoofing measures and other anti-spam features. The same day, the FCC authorizes creating a reassigned numbers database.

Feb. 13, 2019

FCC Chairman Ajit Pai warned that if providers do not follow through with implementing SHAKEN/STIR for caller ID authentication by the end of the year, "the FCC will have to consider regulatory intervention."

The final rule establishing the reassigned numbers database went into effect on **March 26, 2019**.