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Does Price Regulation Affect Competition?

Evidence from Credit Card Solicitations

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The subprime mortgage crisis of 2008 led to a surge of policy and legislative initiatives in regulating consumer financial products. A number of federal legislations were rolled out, while others meant to protect consumers in household finance markets were under consideration. A notable example of such legislations is the Credit Card Accountability, Responsibility, and Disclosure Act of 2009 (CARD Act). The CARD Act was enacted with the objective of protecting consumers and establishing fair and transparent practices in the credit card market. The CARD Act restricts, among other things, consumer credit card issuers' ability to increase interest rates on outstanding balances. This restriction prompted the classic concern regarding unintended consequences of hampering competition, since it limits issuers' feasible pricing space, making credit supply less elastic. We investigate the effect of the CARD Act on issuers' competition.

Identifying effects on competition is challenging in part because, lacking proper instruments, it is difficult to parse out observed quantity and price changes in equilibrium into supply-and-demand effects. We take advantage of a unique proprietary data set of credit card mail solicitations that presents supply measures helpful for analyzing the dynamics of competition among major credit card issuers. Direct mail marketing has been one of the most important channels through which banks market their credit card products to consumers. Research demonstrates that the information contained in these mail offers can be used to infer the supply of such credit.

We focus on the degree to which a credit card issuer reacts to recent changes by its competitors, which we refer to as the competitive responsiveness. The responsiveness of a firm to rivals' actions has been used to assess competition in other industries. For example, using a similar approach, Maura Doyle and Christopher Snyder examine the motor vehicle industry and find that firms adjust their planned and actual production in response to similar actions of their rivals.

We propose an intuitive and theoretically appealing indicator to measure competition in the credit card market—the degree to which a card issuer responds to earlier changes in offered interest rates of its competitors. If competition in the credit card market weakened, each issuer will dampen its responses to competitors' changes in offered interest rates.

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Credit card mail solicitations are infamously complex, typically including dozens of contractual terms, many of which are presented only in the fine print. Our analysis focuses on one particular term in solicitations—the regular purchase interest rate—for three reasons. First, since the CARD Act explicitly restricts increasing interest rates, it most directly affects card issuers' competition on interest rates. Second, unlike the fine-print terms that consumers may often overlook or ignore (such as international transaction fees), the regular purchase interest rate (often referred to as the "go-to rate") is one of the top-line terms that the solicitations saliently highlight, and it directly impacts consumers' borrowing decisions. Third, extant research demonstrates that individual consumers face substantial search and switching costs. This potentially mutes observed manifestations of rate competition in existing credit card accounts. In contrast, changes in offered interest rates in solicitations and reactions to these changes among credit card issuers better capture the dynamics of competition in the industry.

When competitors lower offered interest rates, an issuer's optimal response must balance two countervailing forces. On one hand, if an issuer does not lower its own offered interest rates in response to competitors lowering theirs, it may lose potential customers to competitors. On the other hand, lower average rates slash future interest revenue, at least until repricing the account. Such interest revenue losses tended to be limited prior to the CARD Act, since the card issuers were subject to few restrictions on raising rates on existing accounts. Because the CARD Act limits issuers' ability to reprice, it also potentially increases revenue losses and thereby increases the cost of mimicking lower rates offered by competitors. We therefore expect an issuer's responsiveness to its competitors' changes in offered interest rates (in particular, rate reductions) to become more muted after the implementation of the CARD Act, indicating a decrease in competition.

Unobservable factors present a challenge to testing our conjectures that is frequently encountered in policy-evaluation exercises. These factors, rather than the CARD Act, might have contributed to changes in issuers' responses to competitors' moves. We circumvent this identification difficulty by using offers of small-business credit cards, which are not subject to the provisions of the CARD Act, as the control group. Specifically, we analyze a sample of consumer and small-business credit card offers during 2001–2016, which enables us to compare the pre– and post–CARD Act responsiveness of issuers between consumer and small-business credit card offers extended in the same county. The data we use allow us to confirm that the recipients of consumer and small-business card offers exhibit similar annual changes in demographic and socioeconomic characteristics, both before and after the implementation of the CARD Act. In addition, we control for an extensive set of offer-recipient characteristics and economic conditions in the local area—all potentially affect the competitive actions of issuers marketing to borrowers in a given county.

Our analysis suggests that issuers' responsiveness to competitors' changes in consumer card offered interest rates weakened after the CARD Act relative to offers for small-business cards. Before the CARD Act, for each 1 percentage point change in the average interest rate offered by competitors to consumers in the previous year, a card issuer adjusted its own offered interest rates in the current year by about half a percentage point in the same direction. This competitive responsiveness decreased by about 40 percent after the implementation of the CARD Act. We obtain similar results when focusing on counties with both consumer and small-business card offers and when implementing the analysis at the metropolitan statistical area level.

We extend our analysis in a number of directions to shed more light on the relationship between the CARD Act and reduced competitive responsiveness. First, we exploit the fact that the CARD Act restricts an increase (but not a decrease) in interest rates of existing accounts, which may lead to different competitive-responsiveness changes with respect to competitors raising versus lowering their offered interest rates. We find that consumer credit card issuers appeared to be reluctant to follow a competitor's decreases (but not increases) in offered rates.

Second, we track the more precise timing of the change in the offered-rate responsiveness and find that the weakening in responsiveness in the consumer market relative to the small-business market did not take place before 2009, suggesting parallel pre–CARD Act trends of interest rate responsiveness to consumer and small-business card offers.

Third, we test whether the reduction in the offered-rate responsiveness varies with average credit risk of consumers in a given area, and we find a more pronounced reduction in an issuer's responsiveness to rivals' decreases in offered interest rates in counties with a larger share of subprime borrowers.

Fourth, we investigate whether the findings are driven by the shift of consumer credit card offers toward different client pools by different issuers. In such a scenario, if the profile of the recipients of an issuer's offer becomes riskier after the CARD Act, competitive responsiveness would appear to be more subdued; the opposite would be observed if the profile becomes less risky. We track the share of subprime recipients and the average credit scores of recipients to capture changes in offer recipients' credit quality, and we find no evidence for this alternative explanation.

Fifth, we find no decline in competitive responsiveness to major credit card terms (such as reward programs and annual fees) other than the interest rate.

Finally, we examine the extent to which weakened competitive responsiveness led to more dispersed interest rates and higher markups in consumer card offers. In comparison to small-business cards, we find that the dispersion in consumer card offered rates and the spread of these rates over a two-year Treasury yield have increased after the CARD Act. The results corroborate the proposition that reduced competition leads to greater price dispersion and higher prices paid by consumers.

NOTE:

This research brief is based on Yiwei Dou, Geng Li, and Joshua Ronen, "Does Price Regulation Affect Competition? Evidence from Credit Card Solicitations," Board of Governors of the Federal Reserve System Finance and Economics Discussion Paper no. 2019-018, February 2019, https://www.federalreserve.gov/econres/feds/files/2019018pap.pdf.

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