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THOUGHT LEADERSHIP BRIEF

KEY POINTS

- Our experiment and survey suggests that some investors are unaware of the possible financial fraud of high-return products, justifying policy intervention.
- A simple eye-opening education program can reduce the proportion of naive investors which helps them make better decisions and also reduces, if not eliminates, the firms' incentive to commit financial fraud.
- Competition makes offering normal products less profitable and thus discourages firms from behaving honestly.
- Policy instruments such as interest rate ceilings, legal punishment, and public education programs, may trigger honest firms to strategically shroud information. Consequently, these policies cannot ensure an improvement in investors' welfare.

Financial Fraud and Investor Awareness

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Issue

Financial fraud refers to firms taking deceptive actions to exploit investors, such as Ponzi schemes and running away with the money. The existence of many financially "illiterate" investors opens the door for financial fraud because these investors are likely to be attracted by products that offer too-good-to-be-true returns.

In 2015, 220 thousand Fanya Metal Exchange investors from 20 provinces in China lost a total of CNY 48 billion in investments. The case of Fanya is a typical case of financial fraud in which the firm claims an unrealistically high return without providing any information about risks. Misleading product descriptions may induce naive investors to underestimate

default risk and purchase products that are not consistent with their risk attitudes. In June 2017, China Central Television reported a list of 350 cases of financial fraud that had occurred since 2016. Based on these cases, a police department in China gave a simple and clear warning: "All financial frauds have the same feature – high returns."

The spread of financial fraud suggests that many naive investors may be unaware of the possibility of such fraud. To prevent firms from exploiting these naive investors, policy makers may employ regulatory policies in financial markets such as interest rate ceilings, restrictions on product design, and minimum legislative standards for firms. However, excessive regulations may limit the product choices of investors and possibly reduce welfare. Therefore, the level of sophistication possessed by general investors is an important factor in determining whether certain regulations are necessary. After the 2008 financial crisis, the question of how to strike a balance between protecting investors and respecting investors' own decisions has received considerable attention in policy discussions.

Assessment

We designed an experiment and survey to elicit the reasons that investors purchase fraudulent financial products. Is it because of risk-seeking preferences or unawareness of the high risk associated with financial fraud? We conducted an eye-opening education program about the possibility of financial fraud for products with unrealistically high returns and measured investors' risk preferences by eliciting their choices between products with different returns and risks.

Based on respondents' hypothetical investment decisions, although the education program is simple, it significantly reduces investors' tendency to purchase the fraudulent product. Notably, our education program is the most effective for risk-averse investors. These results suggest that some investors are unaware of the underlying risks behind the high returns before receiving the education program.

Motivated by these findings, we analyze a model with a proportion of boundedly rational (naïve) investors and a firm strategically choosing whether to offer normal or fraudulent products. While sophisticated investors can tell apart normal and fraudulent products, the naïve investors cannot. Specifically, naïve investors do not know that the firm can seize the return on their investment, and thus underestimate the true risk of a fraudulent financial product. As a result, these naïve investors' investment decisions are inconsistent with their risk attitudes. Their behaviors, in turn, create an incentive for the firm to commit financial fraud.

Locations of the communities that participated in the experiment and survey

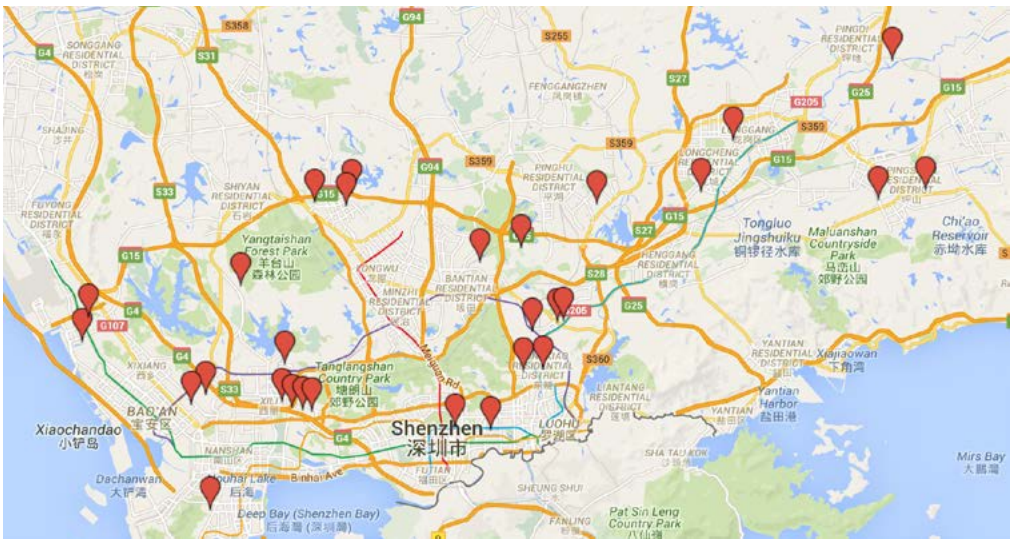
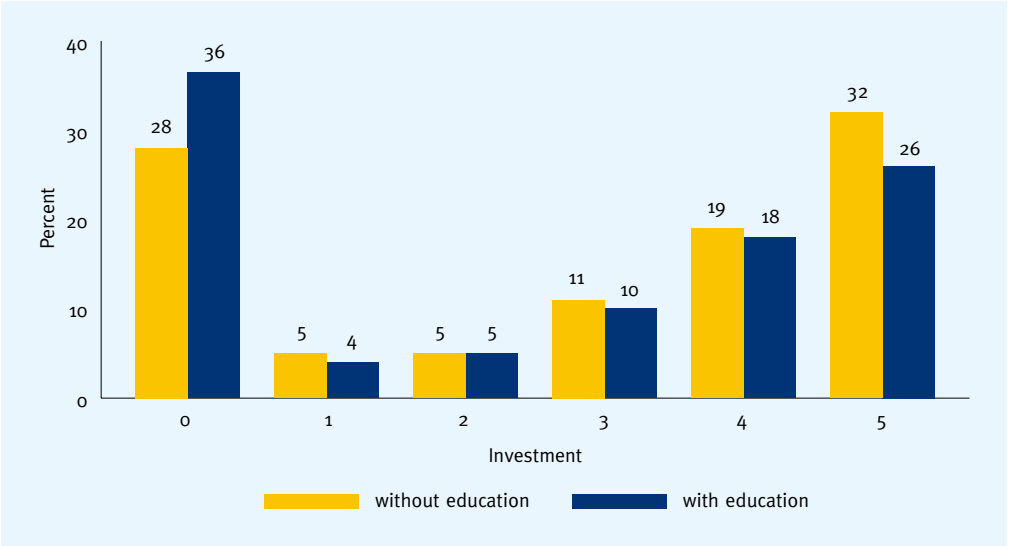


Figure 1: Education reduces the tendency of purchasing fraudulent financial product



If policymakers can reduce the proportion of naive investors through an education program, they can compel the firm to behave honestly given that there is a cost to the firm of committing fraud through lost reputation or legal penalties. Moreover, if this proportion drops below a certain threshold, the firm will find that offering fraudulent products targeting a tiny proportion of naïve investors is less profitable than behaving honestly. So fraudulent products disappear.

After studying the case with a monopoly firm, we explore an important question: Does competition mitigate the problem? Surprisingly, we find that, under competition, firms have a stronger incentive to commit financial fraud than in the monopoly case. The reason is that competition lowers the profit of normal products, so the option of offering fraudulent products becomes more attractive to firms. Consequently, investors' welfare can be harmed by competition because fraudulent products may not emerge in a less competitive market.

Figure 2: Risk-averse investors are the most responsive to the education program

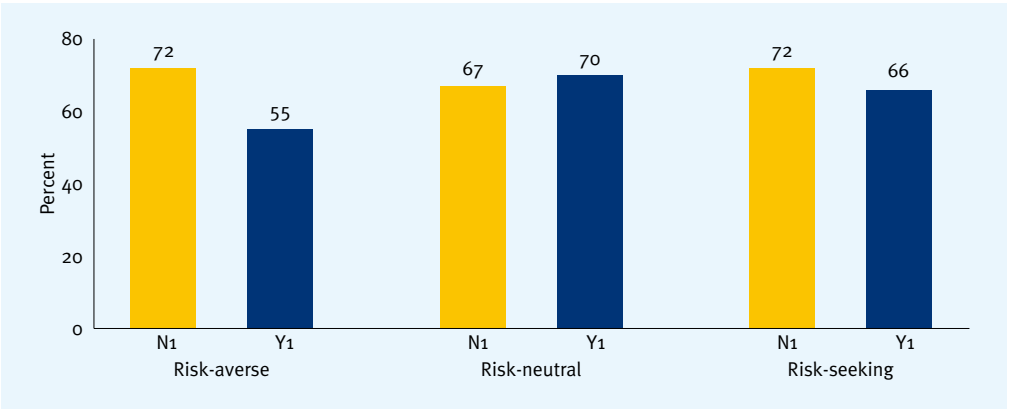


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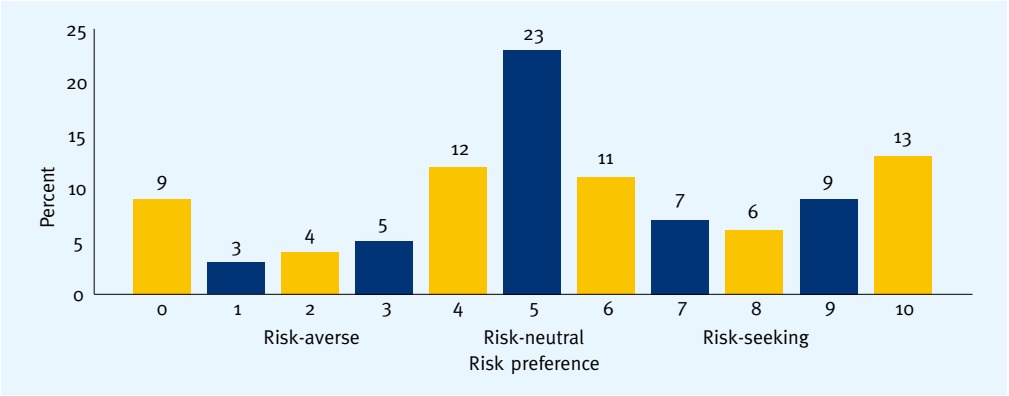
Figure 3: The distribution of risk preferences of subjects

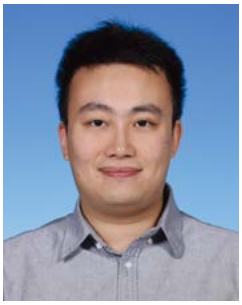


Next, we study firms' private incentive to disclose information, i.e., provide education to investors about financial fraud. Suppose that each firm can costlessly disclose the possibility of financial fraud, which reduces the proportion of naive investors. We find an interesting trade-off: An honest firm has the incentive to increase sophisticated investors for a larger market share. However, it does NOT want to increase this proportion too much because if exploiting naive investors becomes unprofitable, the other firm will deviate from offering fraudulent products and start competing for sophisticated investors.

Under this trade-off, although lowering the interest rate ceiling makes the fraudulent product less attractive, it may not be welfare-improving because the honest firm may decide to conceal information, which prevents the dishonest firm from competing in the market for normal products. Similarly, increasing legal punishment and a public education program also discourage the honest firm from disclosing information. Therefore, these policy interventions may not be welfare-improving as firms can strategically react to them.

Recommendations

1. To determine the proper regulation stringency in financial markets, it is important to measure the degree of investor sophistication (financial literacy).
2. An eye-opening education program can help improve investors' awareness of financial fraud. Reducing the proportion of naive investors not only directly helps these investors but also attenuates the firms' incentive to commit financial fraud.
3. Promoting competition can worsen the problem of financial fraud in the presence of naïve investors. When normal financial products become less profitable under intense competition, firms may switch to offering fraudulent products targeting naïve investors.
4. Policy interventions by conventional tools such as interest rate ceilings and public education programs may discourage honest firms from revealing information that are beneficial to investors. Policymakers should take firms' strategic reaction into account.



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