

Customers and Investors: A Framework for Understanding Financial Institutions

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Many financial intermediaries provide “credit-sensitive” financial services—the effective delivery of these services depends on the credit-worthiness of the provider. This potential sensitivity of the perceived value of the intermediary’s services to the intermediary’s credit risk has important ramifications. In our paper, “Customers and Investors: A Framework for Understanding Financial Institutions”, we examine how this affects the design of contracts between intermediaries and their customers, and how it illuminates ubiquitous features in a wide variety of contracts, institutions, and regulatory practices.

An important feature of financial institutions is that both investors and customers provide financing to the intermediary. Investors, such as stockholders or bondholders of an intermediary, provide risky financing—they expect the payoffs of their claims to be linked to the intermediary’s outcomes. Thus, investors provide financing as well as risk-bearing.

Customers, on the other hand, expect services in exchange for the financing they provide, but prefer to not have the services they receive depend on the fortunes of the provider of the service. The financing provided by these customers appears as a liability of the intermediary. Here, we focus on “credit-sensitive” customers (who we refer to them as just “customers” henceforth). These customers derive utility from the services the intermediary provides to them, and this utility is diminished by an increase in the credit risk of the intermediary.

This distinction between customers and investors leads us to make a number of observations regarding how financial intermediaries structure efficient contracts with their customers. We argue that the efficient contract will need to ensure that the credit risk of the intermediary is borne by the right party, and that this is the investor, not the customer. This means that it is optimal for the customer is primarily exposed only to the risk inherent in the contract terms—the risk that the contract itself has specified—and not to the credit risk of the intermediary itself. We argue that all of this risk is efficiently borne by the investors, who can diversify away the idiosyncratic risk, and be compensated for the systematic risk. By contrast, customers are optimally insulated from institution-specific risks because it is costly or infeasible for them to diversify their contracts across many intermediaries.

A variety of observed real-world customer contracts fit within our framework. One example of a customer is a bank depositor who wants a sure payoff that is not exposed to the credit risk of the bank; those who guarantee these deposits in some way (e.g. the shareholders and the subordinated debtholders implicitly and the deposit insurer explicitly) are investors who bear the risks that depositors do not. Similarly, when a customer purchases an annuity, the customer is guaranteed certain income, even though the value of the annuity is stochastic. By

contrast, a bond sold by the same institution represents a claim held by investors who are exposed to the idiosyncratic risk of the institution. Another example is someone who purchases life insurance from an insurance company. The policyholder does not wish to bear any risk of benefactors not receiving the promised payoff in the state of the world in which the insurance needs to pay off. Shareholders and those who purchase bonds in the company are the insurance company's investors.

Our framework also helps us to better understand the implications of various regulatory practices. One such practice is government-guaranteed deposit insurance, which serves as a way to insulate depositors from the credit risk of the bank by providing them a guaranteed (riskless) claim. In the context of our framework, by removing the customer's exposure to the credit risk of the intermediary, the economic efficiency of the contract is improved.

Another regulatory practice is the protection of the largest banks in an economy by considering them to be "too big to fail" (TBTF). To understand this, we argue that bigger banks are more complex than smaller banks due to the greater *intertwining* of customers and investors in bigger banks. The bigger the bank, the more difficult it becomes to keep separate investors from customers. If the bank is allowed to fail, it also hurts customers as this intertwining means that there is no easy way to protect customers while exposing investors to credit risk. It thus may be necessary to provide guarantees to investors in order to protect customers. This provides a novel economic rationale for TBTF policies.

Finally, our analysis also allows us to better understand financial crises, and how they are propagated. A *crisis* can be thought of as an event that is outside of agents' "model of the world"—when the event happens, agents have difficulty reconciling it with their view of the world, and therefore do not have a predetermined direction to go once it happens. This defining element of a crisis is closely linked to the defining element of customers that we have described. When customers expect to receive a credit-risk-insensitive vector of services from contracts with intermediaries and unexpectedly learn that these contracts have been jeopardized by the impending insolvencies of these intermediaries, it can generate the same forces that give rise to a financial crisis—an unanticipated event which the customer did not consider a possibility and thus does not know how to respond to. Consequently, customers may withdraw their funds and cause a crisis. One of the reasons (even uninsured) intermediaries are so often bailed out by the government during crises is because investors and customers are intertwined in complex ways in many cases, and the unpredictability of customer reactions represents another reason why regulators are unwilling to "roll the dice" and let institutions fail. Indeed, when such institutions go through bankruptcy, customers are inexorably caught up in the bankruptcy process, which makes it uncertain what claim they will eventually get through the courts.

The paper is available for download here:

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2614112