Rent Seeking and Corruption in Financial Markets

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Abstract

We describe recent advances in the study of rent seeking and corruption in financial markets. We outline three areas of inquiry: (*a*) conceptualizing rent seeking, (*b*) identifying rent-provision channels and their general equilibrium impact, and (*c*) designing feasible remedial mechanisms. We provide suggestions for making further progress in these areas and review a variety of approaches taken in the recent literature.

1. INTRODUCTION

Financial markets are entrusted with the all-important task of intermediating capital to where it is most productive and maintaining a healthy balance between risk and reward. As a result, rent seeking, to the extent that it distorts this allocation, is deemed costly for an economy.

This article draws on some of the recent literature on rent seeking in financial markets in order to present an analytical road map that we hope will be useful for researchers interested in this topic. It outlines recent advances and provides suggestions for some interesting questions that lie ahead.

We present three core issues relating to corruption and rent seeking in financial markets that can facilitate further progress in the field. The first issue relates to conceptualizing rent seeking in financial markets. Rent seeking is not limited to developing countries and is likely to be prevalent in developed economies as well. Moreover, it involves not just the government but various market participants. Although not surprising, recognition of the range of participants not only suggests a wider ambit for scholarship and reform, but also necessitates drawing on the agency literature more extensively.

The second issue relates to the empirical challenges in identifying the causes and consequences of rents. This requires progress at both the micro and macro levels. Recognizing the various forms that rent seeking may take allows one to devise a strategy to isolate the effects of rent seeking to the exclusion of alternative (spurious) explanations. Addressing this often requires a combination of microlevel data and innovative research design. From a macro perspective, rent seeking is of interest if it has significant aggregate implications. Hence the microlevel channel identification needs to be accompanied by an aggregate examination that also accounts for general equilibrium considerations.

Finally, in an effort toward furthering a more active and engaged research agenda, we emphasize that limiting rent seeking in financial markets is largely a mechanism design problem aimed at achieving a constrained best. The goal is to minimize rent seeking while explicitly taking into account the structural constraints faced by an economy.

We discuss these three issues in light of the related academic literature in Sections 2–5 below. We also discuss the possibilities of pursuing a more active design agenda and provide potential examples.

2. BROADER FRAMEWORK

2.1. Conceptualizing Rent Seeking and Corruption in Financial Markets

The image that typifies rent seeking in financial markets is a corrupt politician in some developing country who is engaged, behind closed doors, in an underhanded transaction with a compromised bank officer. In this view, rents prevail because state actors in developing economies create or exploit market distortions to their advantage. However, rent seeking is neither limited to developing countries nor solely the domain of government employees.

More broadly, rent seeking in financial markets can take many nuanced forms, involving both state actors, such as bureaucrats and politicians, and market players, such as banks and investors. For this reason, it is useful to begin with a conceptual definition of rent seeking in the context of financial markets.

Under the traditional (and reasonable) assumption that firms face diminishing returns to capital, all capital in an efficient financial system should earn the same risk-adjusted return on capital. It is well-recognized that frictions in the intermediation system, such as agency costs, might distort the capital-allocation process. When such distortions are driven and/or exploited by active agency, including corruption, rents are generated.

We formalize this notion of rent seeking with a simple example. Consider an economy with many firms, in which each firm has access to a production function given by $a^*f(k)$, where a represents a firm's productivity. Let r be the risk-adjusted required return on capital. Then each firm should be able to invest capital k^* such that $f'(k^*) = r/a$. Thus marginal product will be equalized across firms, and firms with higher productivity will invest more capital.

Now imagine that there is a possibility of rent seeking in the economy such that certain firms (we call them rentier firms) have access to capital that requires only (b^*r) return on capital, where $b < 1$. The parameter b captures the extent of corruption or rent seeking in the economy, with lower values corresponding to greater rent seeking. Then rentier firms will invest up to $k_p{}^*$ such that $f'(k^*) = br/a$. Such firms receive higher capital, and marginal product is no longer equated across firms.

The key distortion is represented by the parameter b. What does b represent? One interpretation of b is in the context of government-controlled financial systems in developing countries. Most developing countries have either a large government-owned banking sector or a banking sector with strict limitations on ownership and pricing. In such scenarios, the cost of funds is significantly subsidized through a variety of instruments, including deposit rate ceilings, government bank monopolies, or outright taxpayer subsidies.

Another possible interpretation of b is in the context of private financial markets in developed economies. In particular, implicit government or central bank support could lead some financial institutions to put a lower price on states of nature that are systemically important. r reflects the appropriately priced risk-adjusted cost of funds. However, if financial institutions expect the treasury or central bank to step in and provide protection in certain states of nature, then the cost of funds perceived by a bank will be too low, generating $b < 1$.

Such moral hazard (e.g., too big to fail) has led many observers to question the possible role of rent seeking in the events leading up to the great financial turmoil of 2008. Theoretically, an increasing body of work emphasizes the public-good dimension of liquidity and intermediary capital in financial markets. To the extent that such externalities are exacerbated by government policies and hence are not adequately priced, private financial institutions may benefit at the expense of public resources. Indeed, the possibility of such rents may incentivize financial players to lobby the government to tilt financial rules in their favor.

We should note that the above framework assumes that financial markets only intermediate capital between savers and firms. This is of course a limited view of financial markets. A significant component of financial markets is engaged in the process of channeling credit toward consumers and households. However, the framework above can be readily translated to reflect consumer credit as well: Firms can be replaced with households, and the marginal product of capital can be replaced with the marginal utility of consumption. Rent seeking in this context would favor credit going to rentier households even though they have lower marginal utility of consumption relative to nonrentier households. Of course,

measuring the marginal utility of consumption is a difficult task, but we return to such issues in the following sections.

In short, a broader view of rent seeking in financial markets should recognize that market actors, often financial intermediaries themselves, also contribute to rent generation and that this holds true in even the most developed of financial markets.

2.2. The Rent-Seeking Actors: From State to Market

Rent seeking in financial markets has mostly focused on state actors in developing economies. There is relatively less examination of market players as corrupt actors in developing economies. In developed economies, despite a large literature on special-interest politics, the role of the state as a rent-enabling actor in financial markets has received less attention. Similarly, although there is now increasing work that examines market players engaged in financial market manipulation in developed economies, there has been a general sense that such activities are more a matter of the history of financial market development.

There is an interesting tension in our views on rent-seeking actors. During times of prosperity, market makers are generally regarded as rent-free players, and the view is that state involvement and regulation are best kept minimal because state actors are inefficient and susceptible to rents. Conversely, in crises (and the recent one bears stark witness to this), the same market makers are portrayed as greedy, rapacious, and collusive actors who take advantage of market failures and ill-informed hapless participants. Financial innovations are (in hindsight) regarded as attempts to obfuscate, exploit, and even create distortions that generate rents for the financial intermediaries. In such times, (the same) state actors are brought in as saviors to regulate and reign in corrupt market actors.

The idea that the incidence of rent seeking by state and market actors drastically changes in good and bad financial times seems hard to believe. A more realistic view is that agency issues are prevalent in both good and bad times (although their salience may vary) and for state and market actors.

2.2.1. Politicians and bureaucrats. Although there is a substantial theoretical literature that outlines how state actors may distort markets and state institutions in their favor (see Shleifer & Vishny 1993, 1994), our focus for the purposes of this review is on empirical work.

Faccio (2006) shows that across a range of countries, firms gain value when their CEOs enter politics. Fisman (2001) and Khwaja & Mian (2005) directly estimate the value of rents obtained by firms with political linkages in emerging markets (Indonesia and Pakistan). Although the mechanism is less clear in the case of Indonesia, the Pakistan example shows that politically connected firms obtain rents from government banks in the form of preferential lending in terms of greater access to credit at a lower price; i.e., they borrow 45% more than unconnected firms and have a 50% higher default rate.

A related literature focuses on how the state identity of the lender (and not only the borrower) also contributes to rent provision. This likely results from both soft budget constraints (it is taxpayers who ultimately pay the cost of poor lending rather than depositors) and the direct political/bureaucratic influence on government banks. Cole (2009), Sapienza (2004), and Dinc (2005) demonstrate that government bank lending in emerging countries is significantly impacted by political considerations. For example, government

banks increase their lending during election years (Cole 2009, Dinc 2005), and we often observe preferential pricing in politically powerful regions (Sapienza 2004).

The role of the state as a rent provider can also show up as more implicit preferential treatment toward financial intermediaries and through financial regulation. Brown & Dinc (2005) show across a range of emerging economies that failing banks are less likely to lose their license or be taken over before elections than after the elections are completed. Johnson & Mitton (2003) argue that capital controls provided a means through which politically connected firms were favored in Malaysia. Faccio et al. (2006) demonstrate that across 35 developed and developing countries, politically connected firms are more likely to be bailed out by the state, especially when the country receives multilateral assistance. The recent financial crisis has revealed similar patterns in bailouts.[1] Igan et al. (2010) show that banks that lobbied on issues related to mortgage lending not only were able to make more (potentially) lower-quality loans, but also were more likely to be (positively) affected by bailouts.

The role of civil servants and bureaucrats as recipients of rents in financial markets is less empirically studied. Although there is general recognition that corruption is prevalent in bureaucracies, especially in developing countries (Banerjee 1997, Banerjee et al. 2009), and there is empirical work on bureaucrats as bribe takers in other markets [e.g., in public service licensing and provision (Bertrand et al. 2007, Olken 2007, Reinikka & Svensson 2004), in taxation (Fisman & Wei 2004), and in state subsidies (Bertrand et al. 2009)], the relative lack of such empirical work in financial markets is surprising. This is even more surprising because, unlike politicians who may also have nonpecuniary motives such as electoral popularity, bureaucrats may be more driven by pure financial motives and have a more sustained form of corruption that is less affected by political cycles and considerations. Moreover, one can imagine other influential state-related actors, such as senior army officials, who may be substantial purveyors of rents in financial markets but have received far less attention in the literature.

2.2.2. Market makers or manipulators? With the exception of a large literature on insider trading in equity markets, the evidence of rent seeking by financial market participants is not as extensive as that of state actors in developing or developed economies. This is not to say that such rent seeking is less prevalent, but more likely it is less apparent and harder to isolate.

One form of such rent seeking exists when the private-sector financial intermediaries directly engage in manipulative activities. La Porta et al. (2003) look at related lending by private banks in Mexico and find that banks offer better rates on loans to firms in which they have a controlling stake and that these loans face higher default and lower recovery rates. Moreover, this behavior worsens under macroeconomic financial crises.

Morck et al. (2000) find that more corrupt countries display more synchrony in the movement of prices in their stock exchanges, suggesting price manipulation. Khwaja & Mian (2004) provide direct evidence for such manipulation. They show that brokers engage in pump-and-dump schemes to manipulate stock prices and generate artificial momentum. This results in a volatile market and a significant transfer of funds away from momentum-trading (outside) investors to manipulating brokers. They find that most of the

[1]Relatedly, Leuz & Oberholzer-Gee (2006) and Leuz et al. (2009) show how political connections and lack of transparency impact foreign investment.

brokers on the exchange engage in such activities, although in different stocks, hinting at market-maker-level collusion. Khanna & Sunder (1999) document similar schemes in the Bombay Stock Exchange in India. Moreover, recent evidence suggests that the 2008 financial crisis in the United States witnessed similar pump-and-dump schemes in the CDO market.

A related form of rent seeking by private actors is internal organizational features that lead to rents. The vast literature on corporate governance explores the prevention of such financial fraud in terms of managers stealing shareholder value. Although the same issues are likely to hold for financial intermediaries, they have not been as thoroughly studied. Hertzberg et al. (2010) look at loan-officer rotations in an Argentine bank and show that reports on a borrower's creditworthiness are less accurate when a loan officer is not concerned about being monitored. Although the paper models this as a lack of effort on the loan officer's part (a moral hazard situation), one could imagine that these results may also reflect rent provision due to the agency problem that arises because the loan officer does not directly bear the cost of a bad loan.

Business groups compose another organizational form that is at times suspected of generating rents in financial markets either by directly owning banks or otherwise, although empirical evidence is lacking (Khanna 2000, Khanna & Palepu 2000). There is evidence for rents in the internal financial markets in these groups. Controlling partners may take out (i.e., tunnel) resources from one firm to another, depending on their share of profit in each. Bertrand et al. (2002) provide evidence for significant amounts of tunneling using data on Indian business groups.

Insider information in financial markets and the resulting rents it generates have received substantial attention in the literature, although detecting evidence of such behavior has been challenging. There is a large literature that tries to document the presence and impact of insider trading in equity markets. However, there is relatively little literature available on the rents generated by insider information in other financial markets. Iyer & Puri (2010) find suggestive evidence for rents generated though insider information in banking. Keys et al. (2010) show that in the recent subprime crisis, securitization led to lax screening. In effect, lenders provided insufficient information regarding default risk when they could pass on the risk to others, thus generating and exploiting informational rents.

2.3. The Rent-Seeking Environment: From Developing to Developed Economies

Corruption and rent seeking are typically consequences of weak institutions. The more difficult it is in an economy to define and enforce the rules of the game and limit expropriation of various sorts, the easier it is for politically powerful agents to engage in rent-seeking activities. Developed economies have generally better institutions and provide a more robust array of checks and balances than those in developing economies. As such it is natural to assume that rent seeking in general would be more limited in developed economies. Indeed, cross-country work that we highlight in Section 3.2 finds this to be the case.

Nonetheless, rent seeking and corruption are not necessarily eliminated in developed economies. In the context of financial markets, there is empirical support for the presence of rent seeking in developed markets (some relevant examples include Benmelech & Moskowitz 2010, Cooper et al. 2010, Correia 2009, Knight 2006, Ziobrowski et al.

2004; see Section 3.2 for more details). However, it is the case that the nature and form of rent seeking change significantly in developed markets because of the presence of a stronger institutional environment. For example, one is less likely to find overt instances of politically favored lending by government-owned institutions in developed markets. Similarly, the largest companies in the United States (such as Google, Microsoft, and Intel) do not have ostensibly visible political affiliations, unlike many dominant corporate groups in countries such as Indonesia.

Owing to the presence of stronger institutions, the nature of rent seeking in developed financial markets becomes more sophisticated and subtle. Firms and individuals are constrained to a greater extent to abide by campaign finance laws and other restrictions placed on how and in what capacity they can influence policy makers. Nonetheless, there is a constant struggle between institutions that try to limit the undue influence of private agents and special interests that try to maximize the rents they can extract from the system.

A series of papers has documented the various mechanisms through which firms and financial institutions seek to affect the financial market outcomes in their favor. Kroszner & Stratmann (1998) posit that when outright bribery or fee for service is not possible, members of Congress may institute a congressional committee system to develop reputational commitment mechanisms that guarantee long-term political contributions in return. They argue that the strong cross-sectional and time-series relationship between banking committee membership and political-action-committee contributions is consistent with their hypothesis.

Kroszner & Strahan (1996) show that state-level deregulation of bank branching restrictions was driven by pressures from political interest groups. They demonstrate that states with a larger presence of groups that stood to benefit from deregulation (large banks and small bank-dependent firms) were the first to adopt deregulation legislation.

Mian et al. (2010a) show that mortgage-industry campaign contributions in the beginning of the subprime credit boom increasingly targeted congressional districts with a greater share of subprime borrowers. During credit-expansion years, mortgage-industry campaign contributions increasingly predict congressional voting behavior on legislation related to housing. Relatedly, Igan et al. (2010) demonstrate that lenders who lobby harder on mortgage issues have higher mortgage credit growth, securitize more aggressively, and end up with higher delinquency rates ex post.

Although rent seeking and corruption in financial markets might be more contained in developed economies under normal circumstances, extreme events, such as the recent financial crisis, may create more powerful incentives to influence policy through political connections and other related mechanisms. Indeed there is growing evidence of such behavior in the most recent U.S. financial crisis.

Mian et al. (2010b) show that congressional members who receive larger campaign contributions from the financial industry were more likely to vote in favor of the bank bailout legislation of 2008. Interestingly, this result only holds true for nonretiring members of Congress, suggesting that re-election incentives and hence the need for campaign contributions in the future are driving the correlation between contributions and voting behavior. Duchin & Sosyura (2010) demonstrate that capital allocation to banks under the Troubled Asset Relief Program is partly determined by a bank's political connections to members of Congress on the finance committee and Federal Reserve.

3. APPROACHES TO EMPIRICAL IDENTIFICATION AND IMPACT

3.1. Isolating Rent Seeking

Once we recognize the possible sources and implications for rent seeking in financial markets, the next issue to address is empirical identification. The framework presented in Section 2.1 has some clear predictions that can be tested in data. However, testing these predictions is not a straightforward process. First, we need to be able to classify firms or banks along a dimension that ranks them by their propensity to be exposed to rent-seeking incentives. Current literature has made these classifications in a number of ways, including government ownership, direct ownership stake by politicians and their relatives, and implicit too-big-to-fail guarantees.

Even with a measure of exposure to rent-seeking incentives, a second issue is one of spurious, unobserved factors driving the correlation of interest. For example, suppose we find that politically connected firms receive more credit on more favorable terms than comparable nonpolitical firms. Is this necessarily an indication of rent seeking? Perhaps political connectedness is simultaneously a proxy for firms with more able managers and higher growth prospects.

How do we separate these two plausible hypotheses? We discuss the various approaches taken by existing work on rent seeking in financial markets in more detail here. The common thread in these studies is a reliance on microlevel data (often at the individual firm or borrower level) and the adoption of econometric techniques coming out of applied econometric literature such as fixed effects, instrumental variables, regression discontinuity, and natural experiments.

The empirical challenge in isolating rent seeking is to identify both the rent seekers and providers and the precise channel through which rent seeking is carried out. Although identifying both may not always be feasible or even necessary, as we argue below, having a plausible idea regarding the likely actors engaged in rents and the channels employed can offer empirical strategies that can help isolate rent seeking.

3.1.1. Observing rent channels. A compelling way to empirically identify an activity and actor is through direct reporting and observation. For example, if we want to isolate a firm's investment decisions or a household's consumption patterns, a useful way to start is to directly ask the firm/household and to examine the actual outcome of these choices as an additional verification of the decisions. Not surprisingly, the study of corruption does not lend itself readily to this strategy. It is highly unlikely that bribe recipients will admit to doing so. Moreover, although bribe givers may admit to offering bribes, this is often in situations in which the bribe was considered more of an extortion. Even in those cases, there is a reluctance to identify the precise recipient, and it is difficult to verify the report. Corruption in financial markets may be even more difficult to study, both because the bribe payer may be willingly doing so (and therefore less likely to report) and because often the person on the losing end is the general public or an investor (who both are less likely to be able to identify the rent seeking that is occurring). Moreover, the amounts involved are likely to be substantial, and therefore the actors involved in the rents are influential enough to devote resources to protect themselves by hiding or camouflaging their activity.

Nevertheless, there are still feasible strategies that can be employed. Although direct audit studies have not been frequently used in the study of corruption in financial markets,

they have been effectively utilized in the related contexts of corruption in public service delivery (Bertrand et al. 2007, Olken 2007). One can imagine similar studies in financial markets in which either there is an attempt to directly observe the rent-seeking act (through unannounced audits) or auditors are sent as test subjects. The major challenge of this approach is that, because it directly uncovers the rent seeker, to the extent that such individuals are influential, it may be difficult to implement. Although one can imagine using such techniques to see if lower-level bank officers demand payments to extend loans to a microenterprise, seeing if a politically connected CEO offers bribes to senior bank personnel may be more challenging.

A related direct observational approach is to try and uncover the actual rent-seeking mechanism. This is often more feasible as it does not immediately identify the rent-seeking actors. Moreover, an advantage of doing so in financial markets is that one often has access to detailed transactional-level data. Armed with a hypothesis regarding the actual channel, such detailed transactional data may allow for identifying suspect patterns. An example of this approach is outlined by Khwaja & Mian (2004). In an effort to identify price manipulation in the Karachi stock exchange (Pakistan), they obtain daily stock-level trade data by brokerage firms. They note two suspect patterns in the data. First, brokers at times only seem to trade on their own behalf (they only make trades on one side of the market). Such behavior is likely if they only trade on behalf of a single investor or if there is a coordinated signal to all investors. Khwaja & Mian connect this behavior with a second, more suspicious pattern and observe that these trades are conducted cyclically with another broker. For a series of consecutive trading days, they observe the same two brokers trading the same amounts with each other and reversing their trades the next day (again with each other). In an effort to identify this pump-and-dump scheme, they document that the cyclical trades eventually lead to a price increase, and once both manipulating traders exit the market, the stock price falls. At some stage when the price has fallen enough, the (manipulating) brokers then reenter the market and the same pattern repeats itself.

Although this approach still requires one to rule out alternative explanations for these patterns, such as better ability/information-based explanations, and to argue that the patterns are not consistent with a plausible model of market timing or market making, it enables one to ultimately observe the actual rent-seeking mechanism. The data requirements for such an approach are indeed substantial, but financial market data are often incredibly detailed and comprehensive enough to allow for such strategies. The biggest hurdle to conducting this research involves data-access concerns, as data privacy considerations have to be addressed. However, because this strategy emphasizes isolating the mechanism and not the actual identity of the rent seeker, such privacy concerns can be resolved.

3.1.2. Exploiting differential treatment. An alternative strategy is to focus on the identity of the rent seeker and to use indirect methods to reveal the rents accrued. There are a variety of methods used in this approach, but the first step required in conducting this investigation is to use knowledge of the rent-seeking situation to identify a possible rent-seeking actor. Examples of these actors may include a firm that is identified as having political links or a trader who is suspected of having market manipulation power.

A simple strategy may then be to look at an outcome of interest such as loan terms or trading profitability and argue that if it differs for the identified actor compared with other participants, then it is suggestive of rents. However, the immediate concern with this method is that the simple differences in outcomes between the possible rent-seeking actor

and others may arise from reasons that have nothing to do with rent seeking. The same attribute that we suspect may signify rent seeking, such as political connectedness, may also simply reflect an individual's different (better) ability, resources, or information. The literature therefore has moved away from simpler single differences to more elaborate comparisons that involve double and, at times, even triple differences.

The idea behind these additional differences (beyond the actor's identity) is to better isolate rent seeking. There are a variety of strategies used in recent literature and we illustrate a few below. The effectiveness of each strategy depends on how plausible we believe the additional differences are in removing our concerns, and that in turn relies on an understanding of the mechanisms through which rent seeking occurs. So even if one cannot isolate the specific mechanism, a presentation of a plausible class of mechanisms is essential to validating these strategies.

One effective method has been to argue that there are certain situations (across time or space) in which rent seeking is less or more likely to hold. This classification then provides the additional difference margin. As a result, if the identified actor earns more than the average participant (first difference) in situations that are more likely to allow for rent seeking than other situations (additional difference), then it is more likely that we have isolated rent seeking. This strategy's strength relies on arguing (*a*) that we have indeed correctly identified the rent-seeking situations and (*b*) that these situations (conducive to rent seeking or not) arise from factors that are exogenous; i.e., they do not affect the rent seeking in any other way, other than by changing the effectiveness of the rent-seeking mechanism.

Fisman (2001) provides a compelling illustration of this strategy. He first identifies politically connected firms as those that had ties to former Indonesian President Suharto. This provides his first-difference dimension. His additional difference is comparing across situations that differ in terms of news regarding Suharto's health. He then finds that adverse news regarding Suharto's health had a negative effect on the market valuation of firms that were more politically connected, suggesting that this difference is a measure of the value of rents obtained by these firms. To the extent that we believe that the rent-seeking channel was firms using Suharto to garner favors, and that Suharto's health was influenced by factors that were independent of (connected) firms' performance, this strategy is able to isolate the extent of (at least one specific form of) rent seeking by these connected firms.

Johnson & Mitton (2003) follow a similar strategy in defining connected firms in Malaysia (looking at links to Prime Minister Mahathir) but exploit the dismissal of the Deputy Prime Minister and imposition of capital controls as a reaction to the Asian financial crisis as additional differences. Although plausible, one may raise concerns that both the dismissal and capital-controls imposition may not be as exogenous as health shocks, for example. Igan et al.'s (2010) approach is to identify connected banks as those that lobbied on issues related to mortgage lending. Their additional differences then come from looking at how these banks changed value both during the period when mortgage lending was booming and after the crises when bailouts were announced. This strategy isolates rents to the extent that one can argue that these were both periods that reflected returns to distortionary activities (poor lending and biased bailouts) and that this behavior was not endogenous to the rent-seeking success.

Goldman et al. (2009) compare the stock market reaction of firms with Republican directors with that of firms with Democratic directors to news of Republicans winning the

presidential elections in 2000. They estimate a stock price reaction differential equal to 6% of the firm's value. Because the presidential election had roughly a 50/50 chance of a Republican winning the election, this difference reflects the total value of having a politically affiliated director. Their estimate shows that even in the United States, the financial market attaches significant value to having politically connected directors on company boards.

Other strategies exploit situations that differ in rent due to regular political cycles. Cole (2009) and Dinc (2005) both identify government banks as potentially suspect actors and compare how their lending changes before and after election years, with the idea being that political considerations, and hence rents, are likely more significant just before election years. Sapienza (2004) takes a slightly different approach by comparing government-bank lending across regions that vary in the political power.

The additional differences can often also be along dimensions that do not vary over time but instead vary over space. For example, Khwaja & Mian (2005) identify a firm as politically connected if one or more of its directors have participated in national or provincial elections. Their second dimension of difference is then based on the identity of the lender. The assumption here is that loans from government banks are more likely to reflect rent provision than those from private banks. This is justified by recognizing that government banks are vulnerable to political corruption because of their organizational structure. The top hierarchy of these banks is appointed by the government, which also prescribes the banks' credit and personnel policies. Hence politicians have access to a system of rewards and punishments that they can use to influence the actions of bank officers.

The strategy then is to compare loans granted to a political and nonpolitical firm and see whether these two firms are treated differentially by government and private banks. As one may be concerned that firms borrowing from government banks and private banks may be quite different (i.e., the rent-seeking situation may not be exogenous to factors that directly affect firm borrowing), the authors use firm fixed effects. Thus comparisons are only made for a given firm's differential borrowing across lender type within the set of firms that borrow from both government and private lenders. The authors also illustrate that one may bolster identification by including additional (third) dimensions of differences. In particular, they use measures of the political strength of the firm (e.g., politician vote share) to see if the effects are larger for more politically powerful firms. They also examine the differences in relative outcomes between the period when the politician connected to the firm is in power and when he is not.

3.1.3. Other strategies. There is a range of other strategies, several of which borrow from modern labor economics, that are increasingly being applied to the study of corruption in financial markets.

One example of these methods relies on taking advantage of situations that generate exogenous variation in rent-seeking opportunities. For example, this could be because a rule causes a change in the severity of rent seeking or the rent-seeking actor faces an exogenous shock that reduces his power.

Keys et al. (2010) and Hertzberg et al. (2010) both provide examples of the rule-based approach. Keys et al. (2010) examine potential rent generation in U.S. mortgage lending. They take advantage of a rule of thumb that makes it harder to securitize loans below a FICA score of 620. To the extent that originating lenders generate rents by lax screening on loans more readily securitized, this suggests that the two types of borrowers, those with

scores above and below 620, exogenously represent different degrees of the effectiveness of such rent seeking. Specifically, loans scored directly above 620 are likely to provide more rents to the lender. To ensure that this difference does not reflect other factors that may also affect the outcome, the authors compare outcomes for loans right above and below the threshold. In contrast, Hertzberg et al. (2010) take advantage of a loan-officer rotation policy in an Argentine bank. They argue that this policy generates exogenous variation in the incentives faced by a loan officer to uncover and report creditworthiness information regarding a borrower. Hence comparing loan officers' behavior in periods right before the rotation time (when presumably their reports will more likely be challenged as a new officer would take over the portfolio) with others provides insights into the extent of the moral hazard faced.

One can imagine similar strategies that instead exploit shocks to the rent seekers' power. An effective strategy in the political economy literature has been to exploit close elections and compare outcome differences for politicians who just won or lost an election. Thus one can consider a firm whose affiliate ran and barely lost an election versus another firm whose affiliate ran and barely won. Similar threshold comparisons could apply to other influential appointments (e.g., comparing outcomes for banks whose affiliates closely won or lost a position on a national advisory board, private council, or business network).

The most convincing form of this strategy of generating exogenous variation follows success in the medical sciences in which one directly induces such variations in the form of randomized controlled treatment trials. These trials have increasingly become prevalent in economics as well, although their use in studying rent seeking in financial markets has been quite limited. In fact, in their most basic form, such strategies are unlikely to be feasible. For example, to study whether political presence on a firm's board is likely to generate rents, one would have to randomly assign politicians to firm boards. For most firms and politicians, this is unlikely to be an acceptable option. Although one can imagine versions of such experimental variation, such as offering some firms the option of an influential actor's support, ultimately we feel that this method is more feasible when applied indirectly and is based on an understanding of the rent-seeking mechanism.

It is simplest to illustrate this indirect use of randomized controlled trials through examples. Suppose one is trying to study whether a particular financial intermediary is manipulating the market. It is hard to examine the market by experimentally including or excluding the intermediary. However, it is more feasible to change the (perceived) audit frequency and intensity in the market experimentally (in fact one would ideally not want these audits to be predictable). Doing so would generate exogenous (by construction) situations in which the rent-seeking likelihood and effectiveness vary. Comparing the suspect actors' outcomes across these states is now likely to reflect the presence and size of rent seeking. Such randomized audit-based studies in fact are applied in social services (Bertrand et al. 2007). A recent example can be seen in a study on taxation: Pomeranz (2010) studies the extent of tax evasion in VAT in Chile by comparing how firms who have differential reporting pressures under VAT react to (experimentally) induced variations in perceived audit likelihood.

Although these audit-style changes rely on increasing the costs of rent seeking, one can imagine analogous interventions that alter the benefits. For example, if rents are being accrued though insiders withholding information, one can gauge their presence by seeing how outcomes change if the extent of the information provided to market participants is

(experimentally) varied. Reinikka & Svensson (2005) provide an example of the impact of such an informational newspaper campaign on leakages from schools in Uganda.

A general form of these strategies is therefore that although one may not be able to directly alter the presence of a rent-seeking actor, one can experimentally vary the effectiveness of rent seeking. If doing so alters the returns to the suspected rent-seeking actor, this likely demonstrates the presence of rents. The challenge in these approaches is to be able to argue that the experimental manipulation indeed only affects the effectiveness of the rent-seeking activity and not other factors that may also affect the outcome.

3.2. How Costly Is Corruption in Financial Markets?

Once the impact of rent seeking in financial markets is properly isolated, the next question one must address is its economic magnitude. Although microlevel data are useful in identifying the causal channel of interest, one of their possible limitations is their relevance for estimating economy-wide costs. We first highlight some challenges that studies using microlevel data may have when answering macrolevel-magnitude questions. We then provide a basic outline for how macrolevel costs may be estimated in practice and provide examples from recent work.

The first possible limitation of microlevel data is their reliance on a selected subsample. If the data set in question is not representative of the overall population, then the estimated effect of rent seeking may be applicable only to the population under study. Whether such estimates can be extrapolated to the overall population becomes a debatable issue.

A related concern is that studies at the microlevel, especially those based on instrumental variable techniques, often rely on a narrow portion of the overall variation in the data to estimate the causal effect of interest. Although this local average treatment effect is estimated accurately, it may not be representative of the unconditional average effect in the broader economy. To back out the aggregate impact of rent seeking in financial markets, the average effect is more meaningful.

A second possible limitation of microlevel analysis is that it is likely to ignore general equilibrium effects. Even when rent seeking creates partial equilibrium distortions at the micro level, the general equilibrium response of the economy to these distortions may significantly affect the net impact of rent seeking. For example, political patronage in financing might favor credit to certain sectors. However, the net impact of such a distortion would be low if the distortion primarily displaces private credit that would have otherwise gone to those sectors. A comprehensive understanding of the macro effect of rent seeking needs to take such general equilibrium feedback into account.

We describe here how existing empirical studies have tried to address the abovementioned questions concerning aggregate costs of rent seeking in financial markets. In the remainder of this section, we provide a basic sketch of how microlevel studies can be used to estimate the economy-wide costs related to rent seeking in financial markets.

The framework described in Section 2.1 shows that in the context of credit allocation to firms, the marginal product of capital across firms and sectors should be the same if markets are efficient. Thus the extent to which the marginal product of capital is different across firms gives us a measure of the distortions inherent in the capital-allocation process. Moreover, under some basic assumptions regarding the concavity of the production function, one can back out the aggregate output loss associated with a given cross-sectional

dispersion in the marginal product of capital. Hsieh & Klenow (2009) provide an excellent illustration of such a calculation for India and China.

We can reformulate the question of aggregate cost of rent seeking by asking what fraction of the overall capital misallocation cost is attributable to rent-seeking incentives. A well-constructed study of rent seeking in financial markets should convey the extent to which variation in the marginal product of capital across firms is driven by rent-seeking incentives. Using such predicted variation in marginal product driven purely by rent-seeking incentives, one can back out the aggregate cost of rent seeking using a methodology similar to that of Hsieh & Klenow (2009).

There are admittedly caveats to consider when estimating the economy-wide cost of rent seeking in financial markets. First, as mentioned above, care needs to be taken to ensure that any local average treatment effects can be reasonably extrapolated to the overall economy. Similarly, general equilibrium effects need to be considered when interpreting the aggregate cost calculations.

One important example of general equilibrium effects is the somewhat subtle question of the appropriate counterfactual that should be considered when estimating aggregate costs. The aggregate cost calculation mentioned above assumes efficient markets with equalized marginal product of capital across firms as the appropriate counterfactual. Although useful as a starting benchmark, an efficient market benchmark may not be realistic.

A number of recent theoretical advances that provide a microfoundation for corruption emphasize that a first-best world with no frictions is not a realistic benchmark for comparison when evaluating the macro cost of corruption (e.g., Acemoglu & Verdier 2000, Banerjee 1997). These papers highlight that rent seeking reflects an underlying agency cost or market failure that a society is unable to appropriately contract around.

Given the structural parameters of an economy, such as poor information flow or poor contractual enforcement capacity, rent seeking may be an optimal response or a constrained best. Under these circumstances, it may not be practically possible for an economy to reduce the aggregate costs of rent seeking. Thus from a practical standpoint, the question of limiting rent seeking largely becomes a mechanism design question: How do we minimize distortions resulting from rent seeking given some of the structural constraints facing an economy that are difficult to remove in the short to medium run? We focus on this question below after reviewing the literature on the economic cost of rent seeking in financial markets.

3.2.1. Cross-country evidence. One strand of literature uses cross-country analysis to understand the aggregate cost of corruption. Mauro (1995) was one of the first to adopt this approach. He constructs an index of judicial corruption using survey questionnaires completed in 70 countries around the world. He finds a strong correlation between corruption and private investment and growth. A well-recognized concern in this literature is that government institutions (and hence measures of corruption) and economic outcomes are jointly determined, making it difficult to attribute causality to corruption. Mauro tackles this issue by using ethnolinguistic fractionalization, i.e., the probability that two persons drawn at random from a population will not belong to the same ethnolinguistic group, as an instrument for corruption. To the extent that one is willing to accept that enthnolinguistic fractionalization affects economic outcomes only through its impact on

corruption, Mauro finds that a one-standard-deviation increase in corruption (e.g., going from Uruguay to Bangladesh) lowers annual GDP growth by over half a percentage point.

Subsequent work by Acemoglu et al. (2001) and Acemoglu & Johnson (2005) takes a broader view of corruption and adopts a novel instrumental variable approach to address the causality concern. Using European settler mortality as an instrument for whether colonizers enact expropriation-prone institutions in a country, the authors show that corrupt institutions with weak property rights' protection of citizens lead to very large differences in long-run economic outcomes. They estimate that a one-standard-deviation increase in the risk of expropriation leads to a fivefold increase in income per capita in the long run.

Mauro and Acemoglu et al.'s cross-country work provides useful benchmarks to start thinking about the possible economic costs of corruption. However, because our focus is limited to corruption in financial markets, it is not clear to what extent one can attribute the cost of overall corruption to corruption in financial markets. Given other cross-country work on the importance of financial markets for growth (Levine & Zervos 1998, Rajan & Zingales 1998), it is likely that part of the overall cost of corruption is associated with corruption in financial markets. Estimating the economic cost of corruption that can be attributed solely to corruption in financial markets requires more detailed data than are traditionally used in cross-country studies. We discuss these approaches below.

3.2.2. Estimating the cost of capital misallocation due to political patronage. A number of papers discussed above (Cole 2009, Dinc 2005, Khwaja & Mian 2005, Sapienza 2004) have shown, using detailed loan and bank-level data, that the credit allocation process in a number of countries is distorted because of political interference in the banking sector. Political pressure influences banks to distort their lending rules in favor of firms and households with political connections. Alternatively, banks may be pressured to lend to clients who are deemed important for winning elections by politicians. Such distortions lead to a lower effective cost of capital and greater access to credit for firms that are politically affiliated.

We thus have a fairly consistent pattern in various parts of the world demonstrating that politically motivated lending distorts the credit allocation process. Because the analyses often use detailed loan-level data, they offer two potential advantages over cross-country studies. First, the causal channel from corruption in financial markets to credit outcomes is more carefully laid out. Second, the loan-level estimates combined with the details of the data can be used to integrate up the economy-wide costs of credit misallocation distortions.

Above we discuss how the aggregate cost of capital misallocation due to corruption can be estimated by comparing the distortions created due to political interference with the counterfactual of efficient capital allocation. We illustrate an example of this from Khwaja & Mian (2005). An advantage of this study is that it uses credit registry data that cover all bank lending in Pakistan. As such, the entire banking sector is represented in the data, alleviating the concern that we may be estimating credit distortions in a particularly biased subset of the economy.

Because politically favored lending by government banks performs worse on average in terms of default rates, one component of the economy-wide cost is the distributive cost associated with using taxpayer resources to pay for the higher default rates associated with politically motivated lending. Khwaja & Mian (2005) show that government banks lose 17.9 billion rupees annually owing to higher default rates on political loans.

The distributive cost of these bank losses is equivalent to the deadweight loss associated with higher taxation. Empirical estimates of deadweight loss from taxation in the public finance literature suggest that the deadweight loss ranges from 40% to 100%. Using the lower end of this distribution, they conservatively estimate the distributive cost of politically motivated lending to be 0.16% of GDP per year.

The distributive cost calculation ignores the possibility that the economic value of politically motivated credit (i.e., the marginal product of capital) may be lower as well. In other words, not only do political firms default on government banks, but they utilize the borrowed amount less efficiently. Indeed we find that politically connected firms have worse real outcomes. How much more value would have been added to the economy if politically motivated credit were redirected back to nonpolitical firms with higher return on capital?

Provided one knows the amount of incremental credit that goes to politically connected firms owing to preferential treatment by government banks, this allows backing out the economy-wide efficiency loss due to the overextension of credit to political firms under various assumptions. For example, under the assumption that the incremental defaulted amount represents private consumption at the expense of incremental investment in the economy, Khwaja & Mian (2005) estimate that the cost in forgone productivity equals 0.8% of GDP per year.

A related study that uses a similar technique to estimate the aggregate cost of corruption is Claessens et al. (2008). The authors measure campaign contributions given by Brazilian firms to political candidates and then estimate the stock price reaction for these firms to electoral results. They show that firms with campaign contributions to winning candidates experience higher returns and subsequently receive greater credit from banks. However, the Tobin's Q of contributing firms is lower than that for noncontributing firms, suggesting that the gain in bank credit due to campaign contributions represents a misallocation of credit. Under the counterfactual that the incremental bank credit going to politically connected firms goes to firms without campaign contributions (which have higher Tobin's Q), Claessens et al. estimate an economy-wide cost of capital misallocation that equals 0.2% of GDP per year. This cost estimate is comparable with that found by Khwaja & Mian (2005), given that Claessens et al.'s analysis is limited to publicly listed firms that represent only 14% of total corporate campaign contributions.

The broader point to take away from this discussion is that comprehensive loan-level data offer a unique advantage to calculate the aggregate cost of corruption in financial markets. Such calculations are not possible in cross-country studies because credit misallocation due to corruption cannot be measured without access to microlevel data. Once the extent of credit misallocation is measured in terms of the overextension of credit to politically affiliated firms and at subsidized prices, its overall cost can be estimated by appealing to various structural estimates from the macro and public finance literature.

3.2.3. Estimating the ex ante subsidy to cost of capital due to financial bailouts. A well-recognized political moral hazard in the financial sector is the expectation that governments will bail out systemically or politically important firms in the event of bankruptcy. As discussed above, Brown & Dinc (2005) and Faccio et al. (2006) show that political concerns affect bailouts. In the United States, it is widely alleged that the too-big-to-fail expectation led many of the large U.S. financial institutions to take on excessive risk and leverage in the years leading up to the financial crisis of 2008 (e.g., Sorkin 2009).

If a firm (e.g., a large bank) is expected to be bailed out in the event of default, then it will benefit from excessively low cost of capital. This will be especially true if the bailout is more likely to occur in the disaster states of nature that the financial market cares about most. In this section, we highlight some empirical methodologies that can be used to test whether a given financial firm suspected of benefiting from bailout expectations indeed enjoys excessively low cost of capital.

Gandhi & Lustig (2010) develop an ex ante measure of the distortion created by the U.S. government's implicit guarantee extended to large financial institutions. The idea is that banks with implicit government guarantees should respond less negatively to changes in the probability of large adverse shocks to the U.S. economy. Consistent with this notion, Gandhi & Lustig (2010) find that a long position in the stock portfolio of large U.S. banks and a short position in small banks underperform relative to a benchmark portfolio with similar standard risk factors by almost seven percentage points. These risk-adjusted returns decrease monotonically with bank size, and the pattern is unique to the banking industry. The estimated implicit subsidy provided to large banks is quite large and induces large banks to load up on systemic risk while overleveraging because of the excessively low cost of capital.

An alternative approach to estimating the ex ante subsidy due to implicit government guarantees is offered by Merton's (1977) option-pricing framework. Under this approach, the option-pricing model can be used to price the subsidy provided by the government through its implicit guarantee of debt. Lucas & McDonald (2006) use this approach to estimate the risk associated with the implicit government backing of Fannie Mae and Freddie Mac. This technique can be applied more broadly to estimate the cost of capital subsidy provided to the debt of large versus small banks or other financial institutions suspected of being implicitly backed by their respective governments.

4. AN ACTIVE AGENDA: DESIGN AND EVALUATE REFORMS

What can be done about rent seeking in financial markets given the practical constraints faced by most countries? This is an important question to answer if we are to make serious headway in limiting the extent of corruption and rent seeking in financial markets. Answering this question requires coming up with appropriate mechanisms that can credibly limit the extent of rent seeking in financial markets. We feel that this is a fruitful area of further research and a topic that has not received as much attention as it deserves from researchers.

The theoretical literature on corruption presents some useful avenues for investigating the appropriate mechanism for limiting rent seeking. Shleifer & Vishny (1993) discuss how market structure and the nature of competition may determine the extent of corruption in equilibrium. In their model, competition through a reduction of the barriers to entry limits the ability of corrupt officials to extract bribes.

Similarly, models such as Acemoglu & Robinson (2001) argue that a key constraint to moving away from a rent-seeking equilibrium is commitment. Although Coasian bargaining between agents can be useful in achieving the first best, a lack of commitment in enforcing dynamic contracts can prevent such bargaining from occurring. For example, if a certain group of actors is accumulating rents owing to distortions created by corruption, it could be Pareto improving to guarantee that the corrupt group sufficiently transfers payments in the future while removing the distortions due to corruption. However,

doing so requires a credible commitment that the corrupt agents will receive transfer payments once they forgo control over resources that generate rents for them. As such commitments are difficult in practice, effective reforms are difficult to implement. Thus the challenge is to come up with credible mechanisms to effectively limit the extent of corruption.

One can proceed systematically in this agenda by first examining what factors limit rent seeking in financial markets and how each plays out in terms of its general equilibrium impact. This provides a beginning in the design and promotion of remedial mechanisms. Once this analysis provides a basic structure, one can proceed not only by implementing the mechanism, but by continuously evaluating and readjusting it.

4.1. What Factors Limit Rent Seeking in Financial Markets?

As most of the literature to date has been concerned with identifying the causal mechanisms through which rent seeking and corruption affect financial markets, not much is known about factors that may limit the extent of rent seeking in practice. We highlight what has been learned in the literature.

Does electoral competition limit or promote rent-seeking behavior? A few papers that have focused on the effect of electoral competition on rent seeking uncover an interesting asymmetry. Electoral competition tends to limit rent seeking when the associated rents represent a politically connected firm's private benefits (Khwaja & Mian 2005). However, when rents are accruing to electoral constituents through subsidized credit (Cole 2009), or financial bailouts (Mian et al. 2010b), then greater electoral competition leads to higher rent seeking.

Positive theories of political institutions rationalize the existence of institutions such as democracy, political parties, and majority rules as useful commitment devices (e.g., Acemoglu & Robinson 2001, Bolton & Rosenthal 2002). Mian et al. (2010b) provide empirical evidence in support of the commitment value of ideological preferences. They show that although constituent and special interests impact all congressional members' voting in favor of bailout legislation targeting their respective interests, conservative ideology acts as a commitment device against this pressure. The effect of constituent and special interests' pressure on voting behavior is smaller for congressional members with stronger ideological positions against government intervention.

Finally, a series of papers suggests that handing off ownership of financial institutions to the private sector limits the extent of rent seeking. Sapienza (2004), Khwaja & Mian (2005), Cole (2009), and Dinc (2005) find that rent seeking in the banking sector is largely concentrated in government-owned banks. However, the interpretation of these results is subject to the Lucas critique. Once ownership of all banks is transferred into private hands, rent-seeking agents may concentrate their energy on private banks instead via actions such as related lending (La Porta et al. 2003).

4.2. Designing and Evaluating Reform Mechanisms

Admittedly designing and evaluating mechanism that help curb rent seeking in financial markets may seem overly ambitious. Nevertheless, fields such as auction theory have demonstrated that there can be a productive and dynamic synergy between the world of

research and practice. We therefore feel that extending this engagement to a design that can counter rent seeking in financial markets is an attainable goal and represents an exciting way forward.

Because this is very much a nascent agenda, there is not much existing work that explicitly does so. An example in a related field is an ongoing project to reduce corruption in taxation. A. Khwaja, B. Olken, and A. Qadir are currently engaged with the Punjab (Pakistan) excise and taxation department in a large-scale intervention that seeks to alter the incentives faced by property tax collectors. Property tax is an area in which, by all accounts, there is pervasive corruption, with collection levels below international and developing country norms. The form of corruption is hard to check because it typically involves collusion between the taxpayer and collector. Past efforts, including a parallel audit wing in the department, have failed to work because of collusion within the department. Moreover, low wages for tax collectors make rent seeking appear as the only option if one is to maintain basic living standards. Recognizing both these aspects, the proposed design is based on a mix of flat wage increases, incentives for additional revenue collection above historical benchmarks, and incentivizing assessment accuracy. The approach taken is to avoid going directly against tax collectors as such efforts face huge administrative resistance. Instead, by offering increased wages and incentives that reward effort, support has been built for independent audit systems. Although this project is still in the pilot phases, it has received formal approval and governmental budgetary support. Projects such as these illustrate the real possibility for researchers in designing reform mechanisms collaboratively with policy makers that not only curb rent seeking, but are likely to be feasible and sustained as well.

In the context of some of the specific examples examined above, one can offer initial examples of such designs. For example, the presence of rent seeking by political firms from government but not private banks (Khwaja & Mian 2005) suggests that privatization of the banking sector is an obvious policy reform. However, the Mexican example (La Porta et al. 2003) raises a note of caution. Although the same exercise to uncover related lending does not reveal it to be significant in Pakistan, this could be precisely because rent-seeking actors need not resort to pressurizing private banks when the government banks present an easier avenue. As the opportunity to seek rents through government banks evaporates, there might be more demand to loot banks through the private market. Thus privatization by itself without ensuring a regulatory environment that protects depositors' rights may not be sufficient. Admittedly, privatization and improved corporate regulation are not easy tasks, but our results suggest that more indirect mechanisms may also be effective. Khwaja & Mian (2005) note that perhaps a more subtle (complementary) approach (provided rents accrue to the politicians and not their constituents) is to encourage greater electoral competition, and there are now means (through voter awareness campaigns) that have been shown to effectively do so (Pande 2011).

Brokers manipulating prices in exchanges (Khwaja & Mian 2004) present another reform challenge. Confronting the brokers directly, as tried in Pakistan, is unlikely to succeed if brokers are powerful enough to thwart reforms and see no upside for themselves. Although one can think of creative solutions that can offer a credible Coasian bargain to compensate reform-blocking brokers, this is by no means easy. The case of India suggests that it may be easier to induce reform by instead opening up exchanges to competition. Khanna & Sunder (1999) argue that before the electronic National Stock Exchange was

established, the Bombay Stock Exchange was widely believed to engage in manipulative rent-seeking activities. However, competition from the new (more transparent) National Stock Exchange dissipated the rents Bombay Stock Exchange brokers could now enjoy from market power.

Whether it is politically connected firms or manipulating brokers, the fact remains that reform will always be hard to the extent that it reduces the returns to these agents. However, it is precisely these challenges that imply there is room for more subtle mechanism design that does not immediately pit itself against rent-obtaining influential actors yet still brings about a drop in rent generation.

Any such feasible design is admittedly likely to be far from optimal. The advantage of having a comprehensive and sustained empirical approach is that one can continuously evaluate a reform mechanism and adjust it dynamically. Thus if a particular mechanism leads to rent-seeking agents diverting their attention elsewhere, the ability to examine a range of outcomes is likely to reveal this and offer adjustments to the mechanism to minimize this diversion. Therefore, a more active design agenda has to be combined with an effective evaluation agenda that not only identifies design lapses, but also reveals potential remedial modifications.

5. CONCLUSION

The purpose of this article is not to present a comprehensive review of the literature on rent seeking and corruption in financial markets nor an expansive take on where it should be headed. Instead our hope to is to offer suggestions that may provide some promising directions of future inquiry. Emphasizing that corruption exists in state and nonstate actors and developed and developing countries is a reminder that there are valuable synergies between these literatures. Highlighting the common agency issues prevalent in these rent-seeking situations allows researchers to develop and share empirical approaches that can better isolate and estimate the impact of rent seeking. Ultimately, a more unified approach is needed to build support for a more ambitious and active design agenda.

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