

Dancing with Wolves: Syndicated Loans and the Economics of Multiple Lenders

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firm's passage from borrowing from a single lender to using multiple lenders is often viewed as an inevitable progression in the life of a firm. While there is a strong element of truth in this view, it is also incomplete. The underlying economics of moving from one lender to many involves more than simply asking whether the firm's revenues are large enough to cover the costs of adding more lenders or of acquiring a public debt rating. The U.S. syndicated loan market provides a useful laboratory for exploring the economics of multiple lenders. In this article, Mitchell Berlin discusses recent research on the syndicated loan market that has attempted to answer questions related to firms' use of multiple lenders.

Banking scholars have viewed a firm's passage from borrowing from a single lender to using multiple lenders (and finally to borrowing on public bond markets) as an inevitable characteristic of the life cycle of a growing firm. According to this view, small



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Banking and Financial Markets section. This article is available free of charge at www.philadelphiafed.org/econ/br/index.

firms borrow from a single bank, middle-market firms borrow from multiple banks, and large firms use multiple sources of finance. While there is a strong element of truth in this view, it is also very incomplete. The underlying economics of this decision involves more than simply asking whether the firm's revenues are large enough to cover the transaction costs of adding one or more lenders (e.g., providing another set of financial statements) or the costs of getting a public debt rating.¹ Recent research has shown that the number of lenders fundamentally affects the nature of the firm's relationship with its lenders.

In the U.S., the *syndicated loan* market is a particularly useful laboratory for exploring the economics of mul-

iple lenders. (See *Syndicated Loans*.) A syndicated loan is one in which the loan is parceled among a number of banks, ranging from two lenders to more than 30 in some cases.² From the firm's side, we can think of the syndicated loan as a formal substitute for negotiating and signing a bunch of separate agreements with multiple lenders on its own. Everything else equal, the firm — especially a large firm — can borrow at a lower loan rate when no single lender is too heavily exposed to that firm. When a bank has a well-diversified loan portfolio, losses on a single loan will lower the lender's profits but will not threaten the lender's solvency. In turn, the lender can charge a lower rate because the loan poses less risk to the return on the lender's entire portfolio. Accord-

¹ One piece of evidence that firm size alone doesn't explain the number of lenders is that there is substantial international variation in the number of lenders used by firms of similar size. For a sample of middle market and large firms, Steven Ongena and David Smith document that the median number of lenders ranges from over 10 in Italy and Portugal to just two banks in Norway, Sweden, the United Kingdom, and Ireland. A sample of U.S. firms comparable in size to those in Ongena and Smith's sample would have a median of three or four. There is a growing literature that seeks to explain these differences in the number of lenders per firm. The results from this literature are still preliminary, and I don't discuss them in this article.

² Although commercial banks make the lion's share of syndicated loans, other types of intermediaries, including finance companies, investment banks, and hedge funds, also hold syndicated loans. Indeed, finance companies and investment banks are sometimes lead arrangers. Since nothing in this article hinges on the distinctions among different types of lenders, I will often use the terms *bank* and *lender* interchangeably.

Syndicated Loans

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he U.S. syndicated loan market has grown very rapidly in the last 10 years: from \$137 million of new syndicated loans in 1987 to well over \$1 trillion in 2006 (see the Figure). From the lender's standpoint, the syndicated loan is an

efficient way to lend to its larger customers while maintaining a diversified loan portfolio. The originating bank keeps a fraction of the loan — the amount depends on contractual issues that I discuss at length in the text of this article — while the majority of the loan is held on the books of the other syndicate members.

In a syndicated loan, the contract is negotiated between a lead bank and the borrower. Currently, 62 percent of the deals are originated by three lead banks — JP Morgan (29 percent), Bank of America (18 percent), and Citigroup (15 percent) — with no other bank originating more than 6 percent of the deals. During the recent wave of loans to finance mergers, investment banks such as Goldman Sachs have played an increasingly prominent role. Commonly, multiple loans are negotiated at the same time; for example, the deal may include both a line of credit and a term loan.

After the terms are negotiated, pieces of the loan are then sold to other lenders, each of which holds a pro rata share of the original loan. Legally, each member of the syndicate has a separate agreement with the borrower. Thus, unlike certain types of loan sales or many mortgage-backed securities — in which the cash flows and collateral from the original loan can be sliced and diced in many ways — each member of the syndicate has a loan that differs only in its size. The main formal responsibility of the lead bank is to service the loan, that is, to receive and distribute loan payments to syndicate members, oversee the collateral, and so forth. I use the word *formal* because bank regulations require all syndicate members to perform due diligence and to monitor the loan, no matter how small their share. In practice, the lead bank takes disproportionate responsibility for monitoring the borrower.

There is significant variation in the structure of syndicated loans, and the size of the borrowing firm is the

single most important factor determining the structure. Using the sample from Amir Sufi's article, which includes over 12,000 syndicated deals from 1992 to 2003, the total sales of the borrowers range from \$48 million (10th percentile), to \$367 million (50th percentile), to \$3.5 billion (90th percentile). Thus, borrowers in the syndicated loan market range from middle-market firms to the very largest firms in the world. In Sufi's sample, deal sizes range from \$40 million (10th percentile), to \$150 million (50th percentile), to \$8.5 billion (90th percentile).^{*} To gain some perspective, \$1 million is the usual ceiling that empirical researchers use to define a small business loan.

Syndicate size ranges from two lenders (10th percentile), to five lenders (50th percentile), to 18 lenders (90th percentile), and the share of the loan retained by the lead bank ranges from 8 percent (10th percentile), to 24 percent (50th percentile), to 56 percent (90th percentile).

Note that the lead bank holds at least a quarter of the total loan in half of the deals. This relatively high number suggests that significant impediments to diversification exist in this market. Many of the larger deals involve multiple lead banks. Pascal Francois and Franck Misonnier-Pierra argue that the lead banks divide up the administrative tasks according to comparative advantage.

FIGURE

Size of the U.S. Syndicated Loan Market

Year	Dollars, bil
1996	960
1997	1,120
1998	1,103
1999	1,050
2000	1,220
2001	1,170
2002	930
2003	780
2004	1,290
2005	1,480
2006	1,416

Source: *Bank Loan Report*, various issues

^{*} U.S. bank regulators collect information on all syndicated loans, loan commitments, standby letters of credit, and leases with a value greater than \$20 million that are held by at least three lenders in the shared national credit (SNC) program.

ing to this logic, lenders and borrowers will seek to achieve maximum diversification by increasing the number of lenders as much as possible (subject to the additional transaction costs of borrowing from multiple banks).

But lender diversification is not the only factor that affects the cost of borrowing through a syndicated loan. Steven Dennis and Donald Mulineaux have described syndicated lending as an intermediate form of financing on a continuum ranging from *relationship lending* — which involves close and continuous monitoring of the firm by its lender — to *transactional lending* — which involves arm's length interactions between the borrowing firm and its lender(s). The size and structure of loan syndicates and the structure of syndicated loan contracts provide evidence about the terms of the tradeoffs a firm faces when it moves from a single lender to multiple lenders.³ Indeed, it is useful to think of the loan syndicate as an institution *designed* to govern the interactions between the firm and its lenders and between the lenders. Factors such as the share held by the lead bank, the number and identity of syndicate members, and, for that matter, the loan contract itself are designed to balance the benefits and costs of using multiple lenders.

Some of the questions that can be addressed by examining the syndicated loan market are: What types of firms borrow through syndicated loans? What is the optimal number of lenders? How does increasing the number of lenders affect banks' ability to monitor firms? And to what extent do lending syndicates facilitate or inhibit

contract renegotiation? In the last few years, researchers have made a lot of progress in answering these questions.

MULTIPLE LENDERS REDUCE THE HOLD-UP PROBLEM

Lending Relationships Create Informational Monopolies. From the firm's standpoint, maintaining a close, continuing lending relationship with a single bank has numerous benefits. Notably, the lender becomes better informed about the firm's business over time. For example, an essentially healthy firm's cash flows might drop temporarily. A bank with long experience lending to the firm can more easily distinguish temporary financial difficulties from the beginnings of more serious financial problems and is less likely to mistakenly seek to protect itself by raising the firm's loan rate, cutting its credit line, or increasing collateral requirements.

But much of the knowledge gained through years of experience is *soft information*; that is, it can't necessarily be easily coded and transmitted to another lender. This gives the firm's banker an informational advantage over potential competitors and endows the firm's bank with a degree of monopoly power over its long-time borrowers. For example, even if the firm's financial problems are temporary, the firm's bank might nonetheless take the opportunity to raise the firm's loan rate — an example of what contract theorists call the *hold-up problem*. Of course, the firm can threaten to take its business to another lender. But any new bank faces an inference problem because it knows less about the firm than the firm's long-time lender. The potential lender will reason: "If we actually succeed in capturing the firm's business, it's likely that the firm's current lender knows something we don't and the firm's problems really are serious." Accordingly, the potential com-

petitor will make the loan only at a high loan rate, if at all. Since potential competition is weakened by the original lender's informational monopoly, long-term borrowers will pay higher than a fully competitive rate and long-time lenders can capture what economists call *informational rents*.

Empirical Evidence of Hold-Up Problems in Banking. Recently, financial economists have found convincing evidence that hold-up problems are not just a theoretical possibility. In her working paper, Carola Schenone follows a sample of firms for a number of years before and after their *initial public offering* (IPO), when they first sell stock to the public. A private firm — a firm whose stock is held by a small number of investors — is not required by law or by custom to publish detailed information about its profitability. However, after it sells stock to the wider public in an IPO, a firm is required by law to provide a lot of information to the Securities and Exchange Commission (SEC), the primary regulator in securities markets; this information is also available to the investing public. In addition, publicly traded firms are closely followed by financial analysts, who make a living evaluating the prospects of the firms they cover. So, when a firm goes public, more market participants are actually producing information about the firm. Schenone finds that following an IPO, the firm's main bank lender immediately begins charging lower loan rates to the firm, evidence that the bank originally had an informational monopoly but that wider availability of information about the firm has undermined its monopoly power.

João Santos and Andrew Winton's article examines how lending relationships change when information about firms becomes routinely available. They examine two groups of firms: firms that have access to public debt

³ Existing evidence doesn't permit us to quantify the share of the syndicated loan market among all loans made to borrowers who use multiple lenders.

markets and bank-dependent firms.⁴ Unlike the case with firms that borrow exclusively from banks (and other private lenders such as finance companies), a significant amount of public information is routinely available about firms that sell bonds. Santos and Winton show that bank-dependent firms pay higher rates than firms that have access to bond markets. They also show that while all firms pay higher bank loan rates in recessions — because the risk of default is higher during recessions — loan rates rise more for bank-dependent firms.⁵ This is consistent with the view that banks' market power over borrowers is greatest when their private information is most valuable, that is, when other potential lenders' concerns about a firm's creditworthiness are likely to be greatest.

Joel Houston and Christopher James's article provides evidence that multiple banks reduce hold-up problems. A firm heavily engaged in R&D

may be particularly prone to being held up by its lender because the firm's prospects depend heavily on activities for which information is neither publicly available nor easy to interpret. Indeed, the profitability of much R&D activity depends crucially on the information being kept secret from other market

banks may reduce the severity of the hold-up problem, having multiple lenders also creates its own set of problems. Studying the structure of loan syndicates and syndicated loan contracts provides insights into these problems. Although not all firms that borrow from multiple banks take out syndi-

Although not all firms that borrow from multiple banks take out syndicated loans, we can think of the loan syndicate as an institution designed specifically to mitigate the problems that arise with multiple lenders.

participants. Houston and James show that firms with larger R&D expenditures reduce their reliance on bank debt if they borrow from a single bank. In contrast, for those firms that borrow from multiple banks, larger R&D expenditures are associated with more bank debt. These results suggest that firms at severe risk of hold-up — firms with a single bank lender — reduce their lender's bargaining power by reducing indebtedness; when the firm has multiple lenders, it can take on more debt with less risk of hold-up.⁶ That said, although a firm with heavy R&D expenditures may have a strong incentive to diversify its funding sources, hard-to-interpret information also tends to limit the number of potential lenders (as I discuss in detail in the next section).

While borrowing from multiple

cated loans, we can think of the loan syndicate as an institution designed specifically to mitigate the problems that arise with multiple lenders. As a fast-growing segment of the corporate debt market, the market for syndicated loans is also interesting in its own right.

INCENTIVES TO MONITOR DECLINE WHEN THERE ARE MULTIPLE LENDERS

In the modern theory of the banking firm, banks are viewed as specialists both in evaluating the creditworthiness of borrowers (screening) and in keeping close tabs on borrowers once they have taken out a loan (monitoring). (From now on I'll use the word *monitoring* to refer to both screening and monitoring.) A single lender that holds a borrower's entire loan is exposed to all of the losses should the loan go bad. Thus, we expect this bank to have a strong incentive to monitor the firm closely.⁷ However, the lower the bank's share of the loan, the

⁴ The authors define a firm as bank-dependent in two ways: (1) if it has never issued public debt; or (2) if its *last* bond issue was a private placement. Their results hold under either definition. It is worth noting that Santos and Winton's sample of bank-dependent borrowers includes firms that have a single lender and firms that borrow from multiple banks. This sampling decision assumes that hold-up problems do not completely disappear when a firm uses more than one bank. Interestingly, Santos and Winton find that bank-dependent borrowers are less likely to take out successive loans from the same bank than borrowers with access to public debt markets. This suggests that bank-dependent borrowers seek to exploit interbank competition more than borrowers for whom public bond markets provide an alternative to banks. Thus, hold-up problems appear to be relevant for firms borrowing from multiple lenders through syndicated loans.

⁵ The sophisticated reader will wonder whether loan rates rose disproportionately because of some (unmeasured) firm characteristic that affected both loan rates and access to public debt markets. The authors address this concern using *instrumental variables*. The basic idea of this technique is to find factors that plausibly affect a firm's access to bond markets but have no direct effect on loan spreads, for example, inclusion in the S&P 500 index or membership in the NYSE.

⁶ I'm simplifying Houston and James's results a little. Although they do present results for R&D, their main result is that firms with larger *growth opportunities*, that is, profitable future investments, rely less on bank debt when they have a single lender and more on bank debt when they have multiple bank lenders. They measure growth opportunities by Tobin's *Q*: the market value of the firm's assets divided by the book value of the firm's assets. A value of *Q* higher than 1 indicates the existence of growth opportunities (as valued by stock market participants).

⁷ In addition, the possibility of capturing informational rents increases banks' incentives to monitor the firm, as shown by Giovanni Dell'Ariccia and Robert Marquez.

smaller its exposure to loss and the less incentive it has to monitor the loan closely. So a large number of banks holding small pieces of the total loan would have little reason to monitor at all.

This limits the amount of the loan that can be syndicated. Some bank must hold a large enough share of the loan to provide adequate incentives to monitor the borrower on behalf of all lenders. In loan syndicates, the largest share of the loan is held by the lead bank, which typically holds approximately one-quarter of the borrower's loan for the median size syndicated loan.⁸ Of course, the requirement that a single bank retain a substantial share of the loan reduces the potential risk diversification benefits of syndicating the loan. The share of the loan retained by the lead bank balances the gains from providing the lead bank with proper incentives to monitor the firm against the lost diversification benefits. The efficient balance will be different for different types of borrowers.

In particular, we expect that the relative difficulty of providing proper incentives to the lead banker to monitor will be more important for *informationally opaque* firms, that is, firms for which information is not readily available or easily interpreted. When syndicate members have less information about the firm, they must rely more on the lead bank to keep tabs on the borrowing firm on their behalf.

But how can we measure informational opacity? Empirical researchers have ranked firms using a firm's degree of integration into public securities markets as an indicator of opacity. A firm that has gone public through an

⁸ Note that by delegating the task of monitoring to the lead bank, which retains a large share of the loan, the loan syndicate also avoids wasteful duplication of effort by the syndicate members.

IPO must routinely provide information to the SEC, and market participants can readily access this information. Firms that also have a public debt rating from an agency like Standard and Poor's are subject to an even higher level of scrutiny in the marketplace. So we can rank firms from the opaque (private firms), to moderately opaque (public firms without rated debt), to transparent (public firms with a debt rating).

In their article, Dennis and Mullineaux show that the likelihood of a loan's being syndicated at all is greater for public firms than it is for private

For sufficiently opaque borrowers, the lead bank would have to hold such a large share of the loan that the diversification benefits would be simply too small to cover these costs.

firms and that it is greater yet for firms with a debt rating. A reasonable interpretation of this result is that a syndicated loan must yield diversification benefits high enough to at least overcome the fixed costs of organizing the syndicate, for example, hiring the lawyers to write documents, and so forth. For sufficiently opaque borrowers, the lead bank would have to hold such a large share of the loan that the diversification benefits would be simply too small to cover these costs. Furthermore, Amir Sufi's article shows that for loans that actually are syndicated, the share of the loan retained by the lead bank is higher and the syndicate is likely to be smaller for more opaque firms.

The identity of the syndicate members also depends on the informational opacity of the firm. Sufi shows that for more opaque firms, syndicate members are more likely to be located in the same state as the

firm and are also more likely to have lent to the firm in the past. In both cases, the bank is likely to have greater familiarity with the firm, even though there may be little publicly available information about the firm.⁹ Consistent with the view that the share of the loan retained by the lead bank is related to its role in monitoring opaque firms, Sufi's findings show that for transparent firms — those that have a public debt rating — there is no relationship between borrowers' credit rating and the share held by the lead bank. Thus, it is not the risk of the firm, per se, but the syndicate mem-

bers' information about the firm that is important.

MULTIPLE LENDERS CREATE COORDINATION PROBLEMS

Large Syndicates Impede Efficient Renegotiation. Banking scholars argue that lending relationships facilitate flexibility through loan renegotiation. While it is relatively easy for a single lender to renegotiate loan terms with a borrower, it may be very difficult for many lenders to coordinate in negotiations. Furthermore, heterogeneous lenders — for example, lenders with widely varying exposures to the borrower —

⁹ Sufi also finds that for opaque borrowers, syndicate members are more likely to have been members of past syndicates that included the lead bank. This suggests that reputation effects may be important. A lead bank is less likely to shirk its task of monitoring if it knows that angry syndicate members will refuse to join future lending syndicates formed by that lead bank.

may find it hard to coordinate.¹⁰ This has implications for both the size and the structure of loan syndicates.

In my article with Loretta Mester, we argue that flexibility is a key feature of bank loans and that renegotiation and monitoring are intertwined. Once a bank grants a loan, it continues to monitor the firm through a number of different devices. One device is the loan covenant, a contractual restriction that, for example, might require the borrower to keep its net worth above some level or keep its liquid assets above some minimum level. These covenants are tripwires. If the firm's net worth falls below some level, this is an occasion for a more detailed investigation by the bank. If the bank determines that the firm is essentially healthy, it will renegotiate the loan terms to avoid placing the firm in default. However, multiple lenders, especially multiple lenders whose interests are not identical, are a barrier to negotiation. In a large loan syndicate, the originator of the loan can predict that renegotiations will not be easy to coordinate, and contracts will include less stringent covenants. In this sense, large syndicates can undermine the use of covenants as a monitoring device.

Large Syndicates May Be Designed to Impede Negotiations.

According to the preceding view, barriers to negotiation lead to excessive default, and syndicates will be designed to achieve as much flexibility as possible. A second view, however, has been emphasized by Patrick Bolton and David Scharfstein. When it is easy to renegotiate a loan, a borrower may take excessive risks or act in other ways that would reduce the firm's ability to repay the

¹⁰ This has been empirically verified by Stuart Gilson, Kose John, and Larry Lang, among others.

loan in full. If lenders can't credibly threaten to liquidate the firm — for example, if the firm's assets are much more valuable when the firm remains a going venture — the firm knows its lenders have a weak bargaining hand. The borrower knows its lenders will want to renegotiate the loan to minimize their losses, rather than punish the firm by imposing a default. However, syndicates can be designed to make renegotiation more difficult.

Covenants are pervasive in syndicated loan agreements. Furthermore, covenants are set tightly.

Increasing the number of lenders in a syndicate or including members with a strong incentive to hold out in negotiations may discipline the borrower (who can't assume that he can bargain his way out of default).¹¹

Evidence Shows That Ease of Renegotiation Is Valuable. Covenants are pervasive in syndicated loan agreements. In his working paper, Sufi finds that over 60 percent of loan syndications have at least one financial covenant. Furthermore, covenants are set tightly. Ilia Dichev and Douglas Skinner find that over 30 percent of the loans in their sample suffer covenant violations, many of them multiple times. They report that most of the covenant violations are

¹¹ In Bolton and Scharfstein's model, the central tradeoff is that multiple borrowers impose more discipline on borrowers but lead to excessive default when the borrower has bad luck. The optimal number of creditors weighs these two factors.

technical violations — that is, the firm does not actually miss a loan payment — and that covenant violations typically lead to renegotiation rather than default. Thus, the firms that violate covenants in Dichev and Skinner's sample are having financial difficulties, but few are in serious financial distress. This evidence is consistent with our view that syndicates permit routine monitoring through covenants without leading to too many inefficient defaults.¹²

The combination of stringent contracts and flexibility will be most valuable for certain types of borrowers. For example, in the model used in my study with Mester, tight covenants are most valuable for borrowers with high credit risk. These borrowers can lower their borrowing costs by accepting tight covenants that restrict their opportunities for taking excessive risks. But tight covenants also increase the likelihood that the firm will find itself in breach of a covenant, even though the firm is basically healthy. For such firms, the option to renegotiate is most valuable.

Evidence Shows That Syndicates Are Designed to Inhibit Renegotiation for High-Risk Firms. However, in his working paper, Sufi finds that syndicate size is typically *larger* for firms with worse credit ratings, an empirical finding that appears incon-

¹² Mark Pyles and Donald Mullineaux also present some fascinating but preliminary evidence about contractual restrictions on syndicate members' ability to resell their loans. In their sample of rated firms between 1999 and 2003, over two-thirds of the loans have at least one of three types of restrictions on resale, which include requiring the borrower's or the lead bank's approval to sell or a minimum amount (usually \$5 million) that can be sold. The authors find that resale restrictions are more likely for lower rated firms. The most likely interpretation of Pyles and Mullineaux's findings is that the originator seeks to control the size of the syndicate for firms more likely to face financial problems. This is a particularly interesting area for further research.

sistent with the model in my study with Mester because larger syndicates face larger coordination problems. Interestingly, Sufi shows that the larger syndicate is created by adding lenders with very small shares. He argues convincingly that the designer of the syndicate is explicitly creating a class of lenders that will hold out in any negotiations because their exposure to loss is small. The addition of this fringe of lenders with small exposures will tend to create serious coordination problems should contracts need to be renegotiated.¹³

A Possible Reconciliation of Two Views. In fact, Sufi's evidence that syndicates are designed to inhibit renegotiation in the event of default and Dichev and Skinner's evidence that syndicate loan contracts are both stringent and routinely renegotiated are not necessarily inconsistent because the contractual conditions for renegotiating various types of contractual terms differ.¹⁴ The standard syndicate contract requires unanimous

consent of all syndicate members for the renegotiation of the *core contractual terms*: the loan rate, the principal amount, the maturity of the loan, or collateral requirements. In negotiations over any of these contractual terms, even a lender with a very small exposure has a lot of power to influence negotiations.

Matters are different for financial covenants. Although there is less uniformity across syndicates for financial covenants than for core contractual terms, the typical syndicate contract will require lenders holding at least two-thirds of the value of the loan to agree to change a noncore contractual term, such as a financial covenant. (The minimum fractions required to change a noncore term range from one-half to three-quarters.) This means that in negotiations over financial covenants, a lender with a small exposure will seldom be decisive.


Thus, it is plausible that loan syndicates are designed to be very tough in contract negotiations over the core contractual terms — to maintain a credible threat to discipline borrowers — while they are also designed to permit monitoring through stringent covenants that can be renegotiated relatively easily, thereby avoiding a costly default every time a covenant is breached. However, this is only a preliminary hypothesis; further research is necessary to gain a definitive answer.

CONCLUSION

Although a close lending relationship with a single bank can be valuable to a borrowing firm, the bank gains monopoly power over the firm as it gains better information about the firm than other potential lenders. This idea

was first articulated by banking scholars in the 1990s, but researchers have only recently produced convincing direct evidence of the hold-up problem in banking relationships. Overcoming the hold-up problem is one motivation for a firm to give up some of the benefits of an exclusive lending relationship by borrowing from multiple lenders.

We gain a better understanding of what the firm gains and loses in borrowing from multiple lenders by examining the syndicated loan market, in which a lead bank originates a loan, to which other lenders then subscribe. For firms large enough for a syndicated loan to be profitable, the syndicated loan offers some of the aspects of relationship loans while reducing the monopoly power of any single bank. From the lenders' perspective, loan syndications permit banks to make loans to relatively large firms while maintaining a diversified loan portfolio.

Recent evidence suggests that loan syndicates are designed to provide appropriate incentives to monitor the firm by the originating bank; for example, the share retained by the lead bank is larger for informationally opaque firms. Although the evidence is not yet conclusive, loan syndicates also appear to be designed to permit contractual flexibility along some dimensions — financial covenants are relatively stringent, but they are frequently renegotiated — while limiting contractual flexibility on core contractual terms such as the loan rate and the loan maturity. Preliminary evidence also suggests that restrictions on syndicate members' ability to sell their loans are designed to regulate the terms on which syndicated loans can be renegotiated. 

¹³ Benjamin Esty and William Megginson find evidence that project finance syndicates are larger in countries where creditor rights are weak. Project finance syndicates make collateralized loans to fund particular investment projects, for example, a new power plant. Esty and Megginson interpret their finding as evidence that syndicates are designed to inhibit renegotiation in countries where legal sanctions for default are weak and lenders can be at a relative disadvantage in loan negotiations.

¹⁴ The apparent differences between the two sets of results are almost surely not due to different samples of firms or different time periods. Both studies use the same database, and their sample periods overlap substantially. Although Sufi recognizes the tradeoffs involved in having many lenders, he doesn't appear to view the evidence that renegotiation occurs routinely as a challenge for his conclusions.

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