EAST KENTUCKY POWER COOPERATIVE

RECEIVED

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PUBLIC SERVICE COMMISSION

March 1, 2010

Mr. Jeff Derouen
Executive Director
Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40602

Re: PSC Case No. 2009-00476

Dear Mr. Derouen:

On December 30, 2009, East Kentucky Power Cooperative, Inc. ("EKPC") responded to the Commission's letter of December 16, 2009 providing notice of Filing Deficiencies regarding the Application in the above-referenced case. EKPC now submits an update to Application Exhibit 3, Page 1 of 4.

On February 3, 2010, EKPC submitted responses to the First Set of Data Requests of Gallatin Steel, dated January 19, 2010. EKPC now submits updated responses to Request 2 and 8.

An original and 10 copies of each of these updates are enclosed.

Very truly yours,

Ann F. Wood

Ann F. Wood
Manager, Regulatory Services

Enclosures

Cc: Hon. Mike Kurtz
36 E. Seventh Street, Suite 1510
Cincinnati, OH 45202

4775 Lexington Road 40391
P.O. Box 707, Winchester,
Kentucky 40392-0707

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EAST KENTUCKY POWER COOPERATIVE, INC.

USE OF PROCEEDS AND
DESCRIPTION OF FACILITIES TO BE CONSTRUCTED

807 KAR 5:001, Sections 11(1)(c), 11(1)(d) and 11(2)(c)

Use of Proceeds

The proceeds from this private placement financing will be used as East Kentucky Power Cooperative, Inc.'s ("EKPC") funding for the construction of a 278-MW baseload coal-fired circulating fluidized bed ("CFB") generating unit at its Smith site ("Smith 1 CFB"). Smith 1 CFB is scheduled to be in commercial operation approximately forty-two months following the receipt of final permits. Originally, EKPC projected a commercial operation date in the fourth quarter of 2013. However, this revised commercial operation date does not affect EKPC's need for the financing requested in this Application.

Project Description

Smith 1 CFB, the project on which financing is being requested, is being developed by EKPC in Clark County, Kentucky, approximately 15 miles southeast of Winchester and three miles west of Trapp, on the Kentucky River. Smith 1 CFB will be on the north side of the Kentucky River west of State Route 89 and east of Red River Road.

Smith 1 CFB will be similar to the Gilbert and Spurlock 4 units, located at EKPC's Spurlock plant, utilizing virtually the same Alstom CFB boiler, General Electric ("GE") Steam Turbine Generator ("STG"), and Stanley engineering and construction management services. EKPC is the owner and operator of Smith 1 CFB and will act as its own construction manager and start up coordinator.

Smith 1 CFB is a 278-MW net, coal-fired CFB boiler power plant with a mechanical draft cooling tower. Plant emission controls using the Best Available Control Technology will utilize a Selective Non-Catalytic Reduction ("SNCR") System for Nitrogen Oxide ("NOx") control; Fabric Filter baghouse for control of Particulate Matter ("PM"); limestone injection and a polishing dry Flue Gas Desulfurization ("FGD") system for Sulfur Dioxide ("SO_2") control.

Some of the details of Smith 1 CFB are as follows:

- The STG will be supplied by GE and rated at 278 MW net.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2009-00476
FIRST DATA REQUEST RESPONSE

GALLATIN'S FIRST DATA REQUEST DATED 01/19/10
REQUEST 2
RESPONSIBLE PERSON: **John R. Twitchell**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 2. What is the projected cost and in-service date of Smith 1 CFB now? Please provide the relevant documents to support the cost figure.

Response 2. As indicated in the revision to Application Exhibit 3, page 2 of 4, the projected cost of the Smith 1 CFB is $819 million and the projected in-service date is approximately forty-two months following the receipt of final permits. Originally, EKPC projected a commercial operation date in the fourth quarter of 2013. However, this revised commercial operation date does not affect EKPC's need for the financing requested in this Application.

The documents to support the projected costs are currently the subject of a Petition for Confidential Treatment filed by EKPC, and, as such, are redacted.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2009-00476
FIRST DATA REQUEST RESPONSE

GALLATIN'S FIRST DATA REQUEST DATED 01/19/10
REQUEST 8
RESPONSIBLE PERSON: **John R. Twitchell**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 8. Please describe the status of all required state and federal environmental permits for Smith 1 CFB.

Response 8. EKPC expects to receive all necessary state and federal permits for the Smith 1 CFB by March 2011.

Frost Brown Todd LLC
ATTORNEYS

KENTUCKY · OHIO · INDIANA · TENNESSEE · WEST VIRGINIA

Mark David Goss
(859) 244-3232
MGOSS@FBTLAW.COM

March 1, 2010

Via Hand-Delivery

Mr. Jeffrey Derouen
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
P. O. Box 615
Frankfort, Kentucky 40602-0615

Re: East Kentucky Power Cooperative, Inc.
PSC Case No. 2009-00476

Dear Mr. Derouen:

Please find enclosed for filing with the Commission in the above-referenced case an original and ten copies of the responses of East Kentucky Power Cooperative, Inc. ("EKPC") to the Commission Staff's Second Data Request, dated February 17, 2010.

EKPC has declined to answer Gallatin Steel's initial Data Requests 1-4, 1-5, 1-6 and 1-10 (and hence, its second Data Request 2-1, as well) on grounds of relevancy. However, consistent with Commission custom, the parties are currently attempting to resolve this dispute in an amicable fashion before it must be brought to the Commission for consideration.

Very truly yours,

Mark David Goss

Enclosures

cc: Parties of Record

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN APPLICATION OF EAST KENTUCKY POWER	)	
COOPERATIVE, INC. FOR APPROVAL OF	)	CASE NO.
THE ISSUANCE OF $900,000,000 OF SECURED	)	2009-00476
PRIVATE PLACEMENT DEBT AND UP	)	
TO $21,435,000 OF UNSECURED DEBT	)	

RESPONSES TO COMMISSION STAFF'S SECOND DATA REQUEST TO EAST KENTUCKY POWER COOPERATIVE, INC.

DATED FEBRUARY 16, 2010

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

AN APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR APPROVAL OF THE ISSUANCE OF $900,000,000 OF SECURED PRIVATE PLACEMENT DEBT AND UP TO $21,435,000 OF UNSECURED DEBT	)	**CASE NO. 2009-00476**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

David G. Eames, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff Second Data Request in the above-referenced case dated February 16, 2010, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

David G Eames

Subscribed and sworn before me on this 26th day of February, 2010.

Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013
NOTARY ID #409352

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

AN APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR APPROVAL OF THE ISSUANCE OF $900,000,000 OF SECURED PRIVATE PLACEMENT DEBT AND UP TO $21,435,000 OF UNSECURED DEBT	)	**CASE NO. 2009-00476**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

James C. Lamb, Jr., being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff Second Data Request in the above-referenced case dated February 16, 2010, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Jam C Lf

Subscribed and sworn before me on this 26th day of February, 2010.

Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013
NOTARY ID #409352

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2009-00476
SECOND DATA REQUEST RESPONSE

COMMISSION STAFF'S SECOND DATA REQUEST DATED 02/16/10
REQUEST 1
RESPONSIBLE PERSON: **David G. Eames**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 1. Refer to the response to Item 2 of Commission Staff's First Data Request ("Staff's First Request").

a. Provide a detailed description of the "144A market".

b. Describe, generally, the magnitude of the better pricing that may result if EKPC uses the 144A market.

c. Provide a general indication of how much higher issuance costs are in the 144A market compared to the traditional private placement market.

Response 1a. Rule 144A, adopted by the SEC in April 1990, provides an exemption from registration for secondary market transactions in private placements in which the buyer is a sophisticated financial institution, defined in the rule as a qualified institutional buyer (QIB). The rule applies only minimal restrictions to qualifying transactions. QIBs are a subset of accredited investors; but, in any case, most private placements are purchased by QIBs, and thus the rule makes underwriting of new issues and active secondary trading feasible. As defined by Rule 144A, QIBs are financial institutions, corporations, and partnerships that own and invest on a discretionary basis at least $100 million of securities. [1]

[1] United States. Board of Governors of the Federal Reserve System. The Economics of the Private Placement Market. 1993.

Please see a summary of 144A financing compared to other financings on pages 3 and 4 of this response, and the Federal Reserve Board of Governors' Overview on pages 5 through 126 of this response for a very detailed description.

Response 1b. The pricing difference between the 144A and private placement transaction ranges from 0 to 30 bps.

Response 1c. Depending on the size, complexity, and tenor of the transaction, the issuance costs for both 144A and private placement transactions can vary. Issuance costs for 144A transaction range from 60 to 87.5 bps and issuance costs for private placement transactions range from 30 to 45 bps. Therefore, the difference in issuance costs between 144A and private placement could range from 30 to 42.5 bps.

Financing Alternatives

Debt Capital Markets Alternatives

	Traditional Public	144A with Registration Rights	144A No Registration Rights	Traditional Private Placement
Overview	▪ Announced and priced the same day	▪ Announced and priced the same day	▪ Announced and priced within 1-3 days	▪ Announced and priced within 1-2 weeks
	▪ Optional Investor call for infrequent issuers, with potential 1-on-1's via conference call	▪ Optional Investor call for infrequent issuers	▪ Optional Investor call for infrequent issuers; Roadshow if necessary	▪ Investor call and potential 1-on-1's; Roadshow if necessary
	▪ Closing and funding T + 3 business days	▪ Closing and funding T + 3-5 business days	▪ Closing and funding T + 3-5 business days	▪ Closing and Funding 2-4 weeks after pricing (funding longer if delayed structure is used)
	▪ Registered with the SEC immediately	▪ Registered with the SEC 90-120 days after pricing	▪ Never registered with SEC	▪ Never registered with SEC
	▪ Moody's and S&P ratings required	▪ Quarterly (unaudited) and Annual filing required with SEC	▪ Quarterly and Annual filings not filed with SEC	▪ Quarterly and Annual filings not filed with SEC
			▪ Moody's and S&P ratings required for best execution	▪ NAIC Rating based on lowest public rating; although no Moody's or S&P rating required
Pros	▪ Largest Investor Base	▪ Standardized documentation	▪ Secondary trading available through PORTAL (improves liquidity)	▪ Ability to "delay funding" to eliminate negative carry and future market risk
	▪ Standardized documentation	▪ Secondary trading available through PORTAL initially, then TRACE when registered	▪ Larger investor base than a Traditional Private Placement	▪ Great ability to tailor structure and sell "story"
	▪ Benefit of crossover investors between equity and debt		▪ Quarterly and annual financials sent directly to investors	▪ Quarterly and annual financials sent directly to investors
	▪ No limitation on trading		▪ Incurrence covenants	▪ Lowest issuance cost
	▪ Trades reported through TRACE			▪ Ability to issue amortizing structures as well as bullet maturities
	▪ No covenants			▪ Moody's and S&P ratings not required
				▪ Less sensitivity to transaction size and illiquid assets
Cons	▪ Higher issuance costs versus Traditional Private Placement	▪ Higher issuance costs versus Traditional Private Placement	▪ Higher issuance costs versus Traditional Private Placement	▪ Smaller investor universe
	▪ Must be public filer	▪ Must publish quarterly and annual financials	▪ Moody's and S&P ratings required	▪ On site agent and investor due diligence may be required
	▪ Moody's and S&P rating required	▪ Moody's and S&P ratings required	▪ Substantial market pushback for illiquid assets	▪ Maintenance covenants
	▪ Higher minimum size requirements			▪ Less flexibility for pre-payment

KeyBanc Capital Markets

144A vs. Traditional Private Placement

- Private Placements are securities sold to "accredited investors" (as that term is defined in Rule 501 of Regulation D declared under the Securities Act of 1933) in reliance upon the exemption from the registration requirements of the Securities Act of 1933 provided by Section 4(2) thereof and Rule 506 of Regulation D promulgated there under
- 144A: Adopted pursuant to the U.S. Securities Act of 1933, provides a safe harbor from the registration requirements of the Securities Act of 1933 for certain resales of restricted securities to Qualified Institutional Buyers, which generally are large institutional investors with over $100mm in investible assets
- The result is the sale of securities to a relatively small number of accredited investors including, among others, insurance companies, mutual funds, pension funds and large banks

	Public Notes (including 144A Issuances)	Traditional Private Placement
Pros	▪ Favorable market conditions for experienced investment grade credits ▪ Provides long term capital to finance long term assets: up to 30-year bullet maturity ▪ Structure, terms, covenants and documents conform to market standards – not negotiated ▪ Standardized documentation and closing process ▪ Large investor universe ▪ Most nimble execution	▪ Favorable market conditions for investment grade credits ▪ Most flexibility with respect to structure ▪ Lower issuance costs ▪ Smaller minimum deal size requirements than 144A Market ▪ Provides long term capital to finance long term assets: up to 30-year bullet maturity ▪ Yields not exposed to public market volatility ▪ Ability to tranche issue with no "give up" in spread ▪ T + 50 makewhole typically better than in the public investment-grade market ▪ Greater receptivity to "strong credits" ▪ Better pricing in current market environment
Cons	▪ Higher fees (both Issuance and Legal) ▪ Must maintain ratings ▪ New issue size minimum of around $100 million	▪ Prepayable only at contractual make-whole (T+50bp) ▪ Potential for more lengthy negotiation and documentation process ▪ Potentially longer execution than 144A ▪ May require additional management time during execution to address investor questions

Mark Carey, Stephen Prowse, John Rea, and Gregory Udell
Staff, Board of Governors

The staff members of the Board of Governors of the Federal Reserve System and of the Federal Reserve Banks undertake studies that cover a wide range of economic and financial subjects. From time to time the studies that are of general interest are published in the Staff Studies series and summarized in the *Federal Reserve Bulletin*.

The following paper, which is summarized in the *Bulletin* for January 1994, was prepared in the spring of 1993. The analyses and conclusions set forth are those of the authors and do not necessarily indicate concurrence by the Board of Governors, the Federal Reserve Banks, or members of their staffs.

Board of Governors of the Federal Reserve System
Washington, DC 20551

December 1993

Preface

This study would not have been possible without the generous assistance of an enormous number of organizations and individuals. The opinions expressed in the study are not necessarily those of the Board of Governors, of other members of its staff, nor of those who assisted us.

Without implying that they agree with or are responsible for the contents of the study, we are grateful to the following organizations for their participation in formal interviews: Aetna, Bank of America, Bankers Trust, Chemical Bank, Citibank, Continental Bank, First National Bank of Chicago, The First Boston Corporation, Fitch Investors Service, Goldman Sachs and Company, J.P. Morgan, John Hancock Mutual Life, Lehman Brothers, Massachusetts Mutual Life, Merrill Lynch, Mesirow Financial, Metropolitan Life, New York Life, Oppenheimer & Co., The Prudential, Standard & Poor's, State of Wisconsin Investment Board, Teachers Insurance Annuity Association, The Travelers Company, and William Blair Mezzanine Capital Partners.

We are also grateful to the following individuals for the assistance they provided: Loren S. Archibald, Adrian Banky, Steven M. Bavaria, Donald A. Bendernagel, Allen N. Berger, Salvatore J. Bommarito, Sanford Bragg, Philip E. Brown, John E. Cartland, III, Robert E. Chappell, Jr., Gerald Clark, Robert Clement, Richard J. Cobb, Jr., Tim Conway, Patrick J. Corcoran, Sally Corning, Paul R. Crotty, Dean C. Crowe, Andrew Danzig, Charles E. Engros, Eileen Fox, Steven Galante, Andrew B. Hanson, Thomas B. Harker, William Hogue, Gwendolyn S. Iloani, Gregory Johnson, David S. Jones, John Joyce, Gilbey Kamens, Thomas Keavency, Michael B. Kessler, Robert B. Lindstrom, Charles M. Lucas, Kathryn C. Maney, Terrence P. Martin, Dennis P. McCrary, Thomas Messmore, Michael G. Meyers, Stephen T. Monahan, Jr., Anthony Napolitano, Roger Nastou, Scott J. Nelson, R. Gregory Nelson, Kevin Newman, Ramon de Oliveira-Cezar, Barbara Paige, Patrick M. Parkinson, Dale R. Paulshock, Paul Reardon, Steven H. Reiff, David L. Roberts, Clayton S. Rose, Barry M. Sabloff, Martha S. Scanlon, Karl A. Scheld, John E. Schumacher, Terrance M. Shipp, Eric A. Simonson, Bram Smith, Dewain A. Sparrgrove, James W. Stevens, Maleyne M. Syracuse, Drew M. Thomas, Thomas D. Thomson, Richard TB. Trask, William F. Treacy, Bruce Tuckman, Tracy Turner, James C. Tyree, Marc J. Walfish, Russell S. Ward, Richard S. Wilson, Richard A. Yorks, and Robert L. Zobel.

We are especially grateful to those who offered special assistance or who were helpful to an extent far beyond the call of duty or public spiritedness: to S. Ellen Dykes for editorial and production assistance; to Edward C. Ettin and Myron L. Kwast, who inspired and supported the study; to Lloyd Campbell, Nathaniel S. Coolidge, Leland Crabbe, George Fenn, Mitchell A. Post, and Stephen A. Sharpe for their many helpful comments; to David Blood, Simon Jawitz, and Robert E. Joyal for special assistance; and to Jalal Akhavein, Curtis Atkisson, Dana Cogswell, William Gerhardt, and John Leusner for expert research assistance.

Finally, we are grateful for the support of the Board of Governors, without which this study would not have been possible.

Contents

Introduction

The private placement market is an important source of long-term funds for U.S. corporations. Between 1987 and 1992, for example, the gross volume of bonds issued in the private placement market by nonfinancial corporations was more than 60 percent of that issued in the public corporate bond market. Furthermore, at the end of 1992, outstanding privately placed debt of nonfinancial corporations was more than half as large as outstanding bank loans to such corporations.

Despite its significance, the private placement market has received relatively little attention in the financial press or the academic literature. This lack of attention is due partly to the nature of the instrument itself. A private placement is a debt or equity security issued in the United States that is exempt from registration with the Securities and Exchange Commission (SEC) by virtue of being issued in transactions "not involving any public offering."[1] Thus, information about private transactions is often limited, and following and analyzing developments in the market are difficult. The last major study of the private placement market was published in 1972, and only a few articles have appeared in economics and finance journals since then.[2]

This study examines the economic foundations of the market for privately placed debt, analyzes its role in corporate finance, and determines its relation to other corporate debt markets. The market for privately placed equity is briefly described in appendix B. In the remainder of the study, the term *private placement* refers only to privately placed debt.

There seem to be two widespread misperceptions about the nature of the private placement market. One is the belief that it is mainly a substitute for the public bond market: that is, issuers use it mainly to avoid fixed costs associated with SEC registration, and lenders closely resemble buyers of publicly issued bonds. This misperception may have arisen because private placements are securities and because the definition of a private placement focuses on its exemption from registration. Regulatory considerations and lower transaction costs do cause some issuers to use the private market. Principally, however, it is an *information-intensive* market, meaning that lenders must on their own obtain information about borrowers through due diligence and loan monitoring. Many borrowers are smaller, less-well-known companies or have complex financings, and thus they can be served only by lenders that perform extensive credit analyses. Such borrowers effectively have no access to the public bond market, which provides funding primarily to large, well-known firms posing credit risks that can be evaluated and monitored with publicly available information. In this respect, private market lenders, which are mainly life insurance companies, resemble banks more than they resemble buyers of publicly issued corporate debt. Even if registration of public securities were not required, something resembling the private placement market would continue to exist.

The second misperception is that the private placement market is identical to the bank loan market in its economic fundamentals. This misperception may have been fostered by the tendency of some recent studies of information-intensive lending to group all business loans not extended through public security markets under the rubric "private debt." Included in this category are bank loans, private placements, finance company loans, mezzanine finance, venture capital, and other kinds of nonpublic debt. A principal finding of this study, however, is that *all information-intensive lending is not the same.* In particular, the severity of the information problem that a borrower poses for lenders is an important determinant of the markets in which the company borrows and of the terms under which credit is available.

Besides dispelling these misperceptions, the study describes in detail the nature and operation of the private placement market. It also offers empirical support for the proposition that the private placement market is information intensive and that private market lenders and borrowers are different from lenders and borrowers in other markets. It provides a theoretical explanation for the existing structure of business debt markets that builds upon recent theories of financial intermediation, covenants, debt contract renegotiation, and debt maturity. Finally, it analyzes some recent

1. See appendix A for a more detailed definition of "private placement." Some securities issued in other countries are also referred to as "private placements." This study focuses only on securities issued in the United States.
2. Shapiro and Wolf (1972).

developments in the private placement market, including a credit crunch, the effect of the SEC's Rule 144A, and changes in the roles that banks play.

Organization of the Study

The information-intensive nature of the private placement market is the theme of part 1 of the study. This part compares the terms of private placements with those of public bonds and bank loans and considers borrowers' characteristics and their motivations for using the private market, as well as the operations of lenders. An explanation grounded in theories of financial intermediation and financial contracting is given for the structure of the market and for the differences between the private market and other markets for capital.

Part 2 focuses on the process of private issuance and completes our basic analysis of the private placement market by considering the role of agents and the effect of Rule 144A. Agents are involved in most private placements: They advise the issuer and assist in distributing securities. In the process, they gather and disseminate information, an important task for a market in which information is scarce.

In 1990, the SEC adopted Rule 144A to revise and clarify the circumstances under which a privately placed security could be resold. Private placements are often described as illiquid securities, but this perception is not entirely accurate. A relatively small secondary market for private placements has existed for years, although the legal basis for secondary trading was somewhat uncertain.[3]

Rule 144A has led to the development of a market segment for private placements that are *not* information intensive. This new segment is thus fundamentally different from the traditional private market and has many characteristics of the public bond market. Its primary attraction for borrowers has been the availability of funds at interest rates only slightly higher than those in the public market without the burden of registration requirements. Though still developing, the new market has attracted a significant volume of issuance and thus could be a major step toward the integration of U.S. and foreign bond markets.

Part 3 analyzes two special topics. One is the recent credit crunch in the below-investment-grade segment of the private debt market. Life insurance companies had been the primary buyers of low-rated private placements, but most have stopped buying such issues. Many medium-sized borrowers have been left with few alternatives for long-term debt financing. Our explanation for the crunch, which emphasizes a confluence of market and regulatory events, highlights the fragility of information-intensive markets.

The other special topic is the role of commercial banks in the private market, both as agents and as providers of loans that compete somewhat with private placements. The prospect for a substantial increase in competition between the bank loan and private placement markets is considered, as is the prospect for a substantial change in banks' roles as agents.

Sources of Information

Any analysis of the private placement market is handicapped by a lack of readily available information. Because the securities are not registered with the SEC, only limited data about transactions are publicly available, and most participants disclose relatively little about their operations. Also, relatively little has been written about the market.

In conducting this study, we have relied on public sources to the extent possible, but we have also held extensive interviews with market participants. Our interviewees are active participants in the market and include staff members of life insurance companies, pension funds, investment banks, commercial banks, and rating agencies. The information obtained from these interviews is an important part of our analysis, although our conclusions are based, not on any single test or source of information but rather on the weight of the evidence from extant studies, from new empirical results and theoretical arguments presented here, and from the remarks of market participants.

3. For practical purposes, private placements may be legally traded among institutional investors with a reliance on the same assurances and exemptions that are employed in the new-issue market or on Rule 144A, which provides a non-exclusive safe harbor for certain secondary market transactions in private placements among certain institutional investors. Trading that relies on the traditional assurances and exemptions is relatively infrequent because the process is cumbersome and because secondary-market buyers, unless they are already members of a syndicate, must often conduct due diligence just as in the new-issue market.

Part 1: An Economic Analysis of the Traditional Market for Privately Placed Debt

1. Overview of the Traditional Private Placement Market

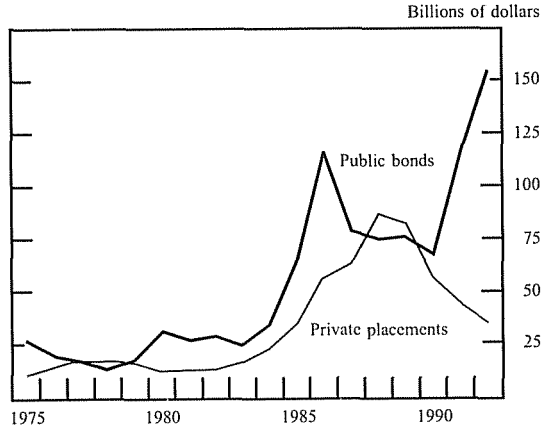
Part 1 of this study describes and analyzes what is now called the traditional market for privately placed debt. Until the development of the Rule 144A market in 1990, it was the entire market for private debt. It continues to be the larger of the two markets. Unless otherwise noted, in part 1 the terms *private placement* and *private debt* refer only to debt securities issued in the traditional market, and the term *private market* refers only to the traditional market for privately placed debt.[4]

Taken as a whole, the traditional and the 144A private placement markets are a significant source of funds for U.S. corporations. Their importance can be seen by comparing gross offerings by nonfinancial corporations of private and public bonds (chart 1). Between 1986 and 1992, for example, gross annual issuance of private placements by such corporations averaged $61 billion per year, or more than 60 percent of average issuance in the public market (table 1).[5] In 1988 and 1989, private issuance actually exceeded public issuance, as the financing of acquisitions and employee stock ownership plans boosted private offerings. However, public issuance surged in 1991–92, partly because of the refinancing of outstanding debt, and private issuance fell. The punitive prepayment penalties normally attached to privately placed debt make refinancing unattractive to issuers even when interest rates are falling.

A similar comparison of private placements with bank loans, another major source of corporate financing, is difficult because of a lack of data on the gross volume of new bank loans and because of differences in maturity. Comparing outstanding bank loans with estimates of outstanding private placements is possible, however. At the end of 1992, bank loans to U.S. nonfinancial corporations were $519 billion, whereas outstanding private placements of nonfinancial corporations were approximately $300 billion, or somewhat more than half of bank loans. At the same time, outstandings of public bonds issued by nonfinancial

4. Some recent academic studies have used the term *private debt* to refer to any debt not issued in the public bond market (and similar public markets)—for example, bank loans—and the term *private market* to refer to all nonpublic debt markets. In this study, the terms refer only to private placements and their market.

1. Gross issuance of publicly offered and privately placed bonds by nonfinancial corporations, 1975–92



SOURCES: Federal Reserve Board and IDD Information Services.

1. Average gross issuance of publicly offered and privately placed bonds by nonfinancial corporations, 1975–92

Billions of dollars, annual rate

Type of issuance	1975–80	1981–85	1986–92
Public offerings	21.0	35.6	97.0
Private placements	14.7	19.8	60.5

SOURCE. Federal Reserve Board and IDD Information Services.

5. Data for gross issuance of private placements are from IDD Information Services and Securities Data Corporation, which obtain the data from a survey of investment banks and commercial banks serving as agents in placing the securities. Data for private placements that do not involve an agent are not included. Consequently, reported totals probably understate gross issuance of private placements.

Cohan (1967) presents evidence that a shift from the public to the private market occurred during the 1930s. He found that private placements represented about 3 percent of debt issuance between 1900 and 1934 but averaged about 46 percent from 1934 to 1965. As noted by Smith and Warner (1979), the relative growth in private issuance partly reflects passage of the Securities Act of 1933, the Securities Exchange Act of 1934, and the Trust Indenture Act of 1939, all of which raised the cost of public debt relative to private placements.

corporations stood at $775 billion.[6] In short, the private placement market has provided a substantial fraction of corporate finance in the United States.

Most private placements are fixed-rate, intermediate- to long-term securities and are issued in amounts between $10 million and $100 million. Borrowers vary greatly in their characteristics, but most are corporations falling into one of three groups: mid-sized firms wishing to borrow for a long term and at a fixed rate, large corporations wishing to issue securities with complex or nonstandard features, and firms wishing to issue quickly or with minimal disclosure. Investors are almost always financial institutions. Life insurance companies buy the great majority of private placements of debt.

Principal Themes of Part 1 and Key Definitions

As noted in the introduction, previous studies have tended to characterize private placements as close substitutes for either publicly issued corporate bonds or for bank loans. Besides providing a detailed description of the market, part 1 develops the theme that neither of these views is correct. Private placements have some of the characteristics of bank loans and public bonds, as well as some unique characteristics.

Studies characterizing private placements as similar to public bonds note that both are securities and both tend to have long maturities and fixed rates. Such studies focus on regulatory and issuance costs as the factors that motivate borrowers to issue privately rather than publicly. In these explanations, some issuers choose the private market to avoid delays and disclosure associated with SEC regulations. Other, relatively small issues are said to be done in the private market because fixed costs of issuance are smaller there, offsetting interest rates that are somewhat higher than in the public market. Large issues are said to be sold in the public market because fixed costs are spread over a larger base, making lower rates the dominant consideration for issuers.

Although regulatory and issuance costs can affect a borrower's choice of market, other economic forces are of greater importance. The traditional private placement market is fundamentally an *information-intensive* market. Private market borrowers or their issues are *information problematic*, and so a key activity of private market lenders is the gathering or production of information about borrower credit quality. The italicized terms are drawn from theories that emphasize the asymmetry of information that often exists between borrowers and lenders. Many borrowers have better information about their prospects than lenders, and they can often take actions once a loan is made to reduce the likelihood of its repayment. To determine the interest rate at which to lend to such borrowers, lenders must engage in *due diligence* during origination; and to control moral hazard risk once a loan is made, they must engage in *loan monitoring*.[7]

Lenders in information-intensive markets are generally financial intermediaries. Because due diligence and loan monitoring involve fixed costs, it is economically efficient that only one or a few lenders lend to an information-problematic borrower, rather than the large number of small lenders of a prototypical theoretical securities market. In theoretical models of information-intensive lending, atomistic lenders (small savers) lend to an intermediary, and the intermediary in turn lends to the ultimate borrowers and is responsible for due diligence and monitoring. Real-world information-intensive intermediaries differ from other intermediaries, such as money market mutual funds, in that they have developed the capabilities required for lender due diligence and monitoring.[8]

6. Outstandings of public bonds of nonfinancial corporations are the sum of bonds rated by Moody's Investors Service and publicly issued medium-term notes. Private placements are estimated by subtracting the figure for public bonds from outstandings of all corporate bonds reported in the flow of funds accounts. Data for bank loans are from the flow of funds accounts.

7. In some contexts, *due diligence* refers specifically to activities directed toward compliance with SEC regulations. In this study, the term refers to all credit analysis performed by lenders before and during origination or issuance. *Moral hazard risk* refers not so much to the risk of fraud or unethical actions as to the risk that a firm's shareholders or managers will take actions that increase the risks borne by bondholders.

8. A few words of explanation of this terminology may be helpful. In common parlance and in the traditional academic literature, *financial intermediary* refers to an institution that gathers funds from many (often small) savers and then lends at a profit. *Intermediary* also sometimes refers to an institution or a person that brings together lenders and borrowers in direct markets, for example an underwriter in the public bond market. In some recent academic literature, however, *intermediary* has come to mean an institution that lends to information-problematic borrowers. We use the terms *information-producing lenders* or *information-intensive lending* instead of *intermediary* and *intermediation* because such a lender need

Firms that issue bonds publicly are generally not information problematic. Public market investors rely mainly on reports by rating agencies and other publicly available information for evaluations of credit risk at the time of issuance and for monitoring.

Information problems are conceptually separate from *observable credit risk*. For example, a subordinated loan to a large, highly leveraged manufacturer of auto parts may be quite risky, but lenders' evaluation and monitoring of the risk may be a relatively straightforward exercise involving publicly available information (financial statements, bond ratings, and some knowledge of the auto industry). In contrast, a loan to a small manufacturer of specialized composite materials may have low risk but require extensive due diligence by lenders to evaluate and price the risk and considerable monitoring to keep the risk under control. The loan may be low risk because the firm has recently received a large, stable defense subcontract and requires additional financing only to support a highly profitable increase in production. These facts, however, are unlikely to be widely known and must be discovered and verified by lenders.

Although information problems and observable credit risk are conceptually separate, they are correlated with one another and with firm size. For example, small firms tend both to be riskier and to pose more information problems for lenders. Market participants sometimes use a firm's size as an index of its access to different credit markets: A large firm has access to all markets, a medium-sized firm has access to the private placement market but not to the public market, and a small firm lacks access to either market. Firm size is often a good indicator because of its correlation with information problems, but the extent of the information problems that a firm poses for lenders usually is the primary determinant of the markets in which the firm may borrow. In many instances, for example, large firms with outstanding public debt have borrowed in the private placement market when their transactions involved complexities that public market investors were not prepared to evaluate.

To be information problematic, a loan must impose more costs on lenders during the initial due diligence stage or the loan monitoring stage, but not necessarily at both stages. For example, the cost of due diligence for a public issue by a large, complex corporation may be greater than that for a private placement by a medium-sized firm. However, the private placement might still be information problematic because it included many more covenants than the public issue and required more monitoring by lenders than public investors are prepared to undertake. Similarly, a private placement by a large, well-known firm that included few covenants and required little monitoring might still be information problematic if it were a very complex or novel issue. In such a case, public lenders would be unprepared to perform the necessary due diligence; only information-intensive lenders would be prepared to do so.

The traditional private placement market thus has much in common with the bank loan market, even though it is a market for securities. Bank borrowers are often small or medium-sized firms for which publicly available information is limited. The prospect for loan repayment is discovered by loan underwriting procedures that are broadly similar to due diligence procedures in the private placement market, and bank borrowers are typically monitored after loans have been made.

Because of these similarities, some studies have grouped bank loans, private placements, and other information-intensive loans under the heading of *private debt*, in some cases implying that all varieties of such debt are fundamentally the same. However, *all information-intensive lending is not the same.* Most important, borrowers in the bank loan market are, on average, substantially more information problematic than borrowers in the private placement market. Also, private placements have mainly long terms and fixed rates whereas bank loans have mainly short terms and floating rates; other differences as well exist among the various nonpublic markets for debt.

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not be an intermediary in the traditional sense (some information-producing lenders are wealthy individuals) and also because many intermediaries, such as money market mutual funds, do little credit analysis.

Recent theoretical literature has also not always clearly distinguished different types and circumstances of credit analysis. The terms *credit evaluation* and *monitoring* often refer to analyses done both before and after a debt contract is signed. We refer to that done before as *due diligence* and to that done after as *loan monitoring*. A distinction between the two is important to our analysis.

Organization of Part 1 and Summary of Findings

The remainder of part 1 describes and analyzes the traditional market for privately placed debt and explains differences between the private, public, and bank loan markets. Section 2 describes the terms of privately placed debt contracts and compares them with terms of bank loans and publicly issued bonds, including issue size, maturity, rates, covenants, and other terms. As in the information-intensive bank loan market (and in contrast to the public bond market), borrowers and lenders typically negotiate the terms of private placements, especially any covenants that restrict the actions of the borrower. Covenants are an important part of the technology of loan monitoring. Both bank loans and private placements often include financial covenants, such as minimum interest-coverage ratios, that can trigger renegotiation of the loan terms if the borrower's characteristics change.[9] Such covenants are very rare in publicly issued securities.

Private market borrowers, described in section 3, issue long-term, fixed-rate debt privately for several reasons. Many are information problematic, and their issues would not be readily accepted in the public bond market. These borrowers are, on average, smaller than issuers in the public market and larger than those that borrow only from banks. Borrowers that are not information problematic generally find total costs to be lower in the public bond market, unless the securities they issue have novel or complex features requiring extensive due diligence by lenders. Many new types of security have been introduced in the private market, but after their features are widely understood have come to be issued mainly in the public market. Some borrowers also use the private market to issue quickly or to avoid disclosures associated with SEC regulations. Finally, some nonproblematic borrowers with small-sized issues use the private market because fixed costs of issuance are lower.

The operations of lenders in the private market, described in section 4, are typical of information-intensive lenders. Life insurance companies, the principal lenders, evaluate and monitor the placements they buy in a manner that is generally similar to that of commercial banks' loan underwriting and monitoring operations. They usually have loan officers, loan committees, and credit analysts. Some even have specialized workout groups.[10] These characteristics differ from those of typical public bond buyers.[11] Although some buyers of publicly issued debt perform some due diligence and monitoring, their efforts are much less extensive than those in information-intensive markets. The activities of public market borrowers are often followed rather closely by credit rating agencies and investment banks.

Most private market lenders attempt to build and maintain reputations for reasonableness in renegotiations of debt contracts. Covenants in information-intensive debt contracts are frequently violated, triggering renegotiations. In some renegotiations, a lender is in a position to extract considerable rents from a borrower. Borrowers thus prefer to contract initially only with lenders that have a reputation for fair dealing. This preference is especially strong in the private placement market, where loans typically are for long terms and for substantial amounts, and carry punitive prepayment penalties. Life insurance companies may be especially adept at building and maintaining such reputations because doing so is especially important in some of their other lines of business.

Asset–liability management considerations make private placements particularly attractive to intermediaries with long-term, fixed-rate liabilities, such as life insurance companies. By the same token, these features of private placements are unattractive to banks, which must bear the costs of swapping fixed-rate payment streams to match their floating-rate liabilities. Conversely, banks are more likely than insurance companies to find short-term, floating-rate loans to be profitable. Such economies of scope are probably the main reason for the observed division of lending between banks and insurance companies. The reasons for the limited participations of other kinds of intermediaries, such as finance compa-

9. Covenants are usually designed to trigger renegotiation when a borrower's credit quality deteriorates, but most covenant violations occur for other reasons, such as borrower growth.

10. In contrast to banks, an insurance company's relationship with a private placement issuer is usually one-dimensional: the life insurance company typically provides only the loan, not other services such as transaction accounts or insurance policies.

11. Insurance companies buy many assets other than private placements, of course, including publicly issued corporate debt. When we refer to public bond buyers we mean the groups within a financial intermediary responsible for purchasing public bonds, and private lenders are the groups responsible for purchasing and monitoring private placements. The operations of these groups tend to be different, with only the private placement groups performing substantial amounts of due diligence and loan monitoring.

nies, mutual funds, and pension funds, are discussed in section 4.

In the final section of part 1, facts and ideas from earlier sections are combined with financial theory to produce a descriptive theory explaining aspects of the current structure of the bank loan, private placement, and public bond markets. The theory emphasizes that information-problematic borrowers choose information-intensive markets because they can, on the whole, obtain better terms there. Flexible renegotiation of contracts in the event of covenant violations is an important part of the mechanism supporting better terms for borrowers, and the mechanics of covenants and renegotiation influence the identity and operations of lenders. The theory offers several reasons that information-intensive lenders are usually financial intermediaries. It reveals links between the extent to which borrowers are information problematic and the maturity of the loans they will tend to obtain. These links imply that lenders' decisions to serve particular classes of borrowers and to invest in particular varieties of due diligence and monitoring capacity will be influenced by the nature of their liabilities.

The theory also helps explain why information-intensive lending seldom occurs in the public bond market. In principle, the public bond market might well have developed the capacity to lend to information-problematic borrowers. However, three features of private placements make them a better vehicle than public bonds for lending to information-problematic borrowers: limited liquidity, the usually small number of investors in any given placement, and lower barriers to the flow of information from borrowers to lenders. Debt contracts that are vehicles for information-intensive lending are typically illiquid and held by only a few investors. A borrower prefers that a debt contract with many restrictive covenants and a high probability of being renegotiated remain with the lenders in the original negotiations. Those are the lenders whose reputations for fairness the borrower originally determined to be adequate. A borrower also prefers that the number of lenders remain small because renegotiation is less costly. Also, flows of certain information, such as borrowers' projections of future performance, are more difficult to manage in the public market than in the private market because of legal issues related to SEC registration.[12]

The argument that the private placement market is information intensive does not imply that regulatory and issuance costs are unimportant. As noted, some issuers that are not information problematic borrow in the private placement market because fixed costs are smaller, issuance is less time consuming, or disclosure can be avoided. However, the remarks of market participants and evidence presented in the body of the study indicate that these factors are less important than the information-intensive nature of private market lending as determinants of its structure and operation. Even if registration requirements were lifted, something resembling the traditional private market would continue to exist. Information-problematic firms would still need long-term, fixed-rate loans, and life insurance companies would still have long-term, fixed-rate liabilities. As information-problematic borrowers tend to be medium-sized or small, and thus tend to issue smaller amounts, lower fixed costs of issuance reinforce the appropriateness of private placements as a vehicle for information-intensive lending.

2. Terms of Privately Placed Debt Contracts

Private placements generally have fixed interest rates, intermediate- to long-term maturities, and moderately large issue sizes. Their contracts frequently include restrictive covenants. These terms differ from those found in other markets for debt, for example, the markets for bank loans and publicly issued bonds.

Issue Size

On average, private placements are larger than bank loans and smaller than public bonds. In 1989, the median new commercial and industrial (C&I) bank loan was for about $50,000; more than 96 percent were less than $10 million (chart 2).[13] When loan size distributions were

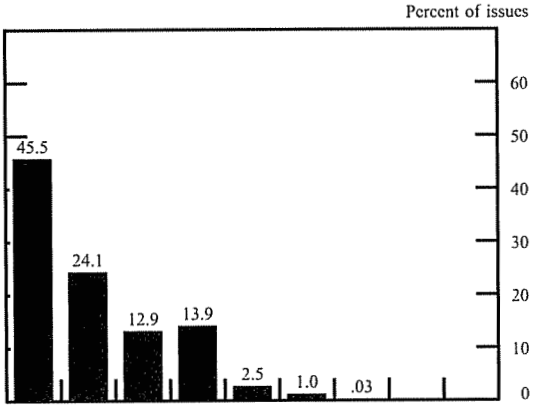
12. Although law and regulation do not prohibit dissemination of such information, the pattern of court rulings regarding legal liability of issuers encourages issuers when making a public offering to disseminate only information for which the historical foundation is clearly demonstrable.

13. The year 1989 was chosen because, as described in the section on the credit crunch (part 3, section 1), 1990–92 may have been unusual years in the private placement market. The nonfinancial subset of all new loans and issues was chosen because data on other types of bank loans are not available. Sources of data and details of the calculations that produced the charts are in appendix G.

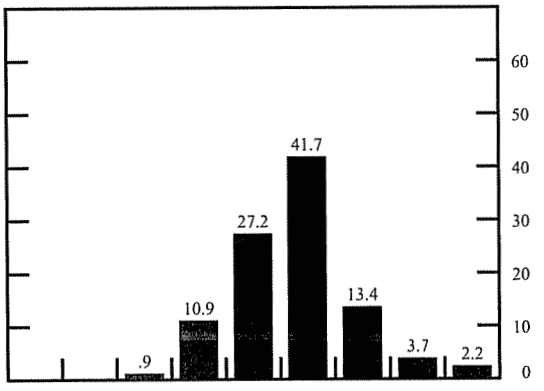
Distribution of size of debt instruments, 1989[1]

By number of issues

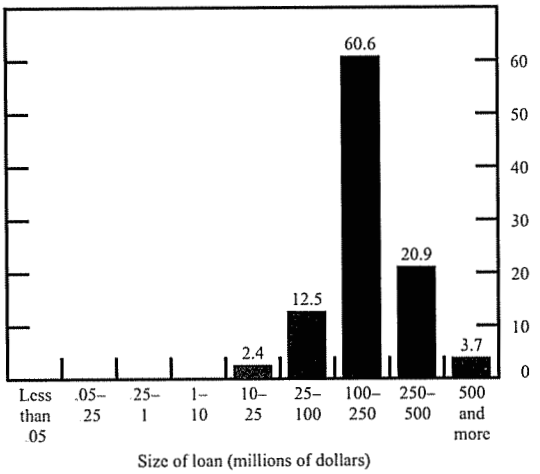
2. Loans



4. Private placements

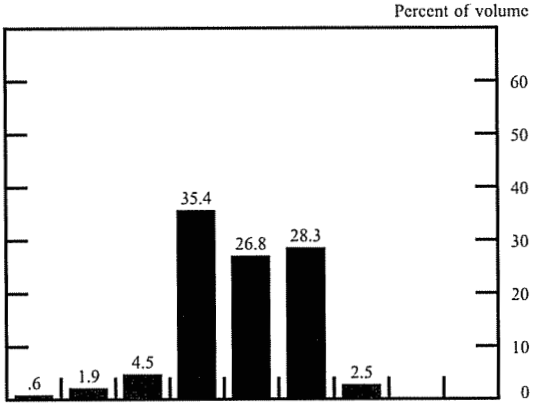


6. Public bonds

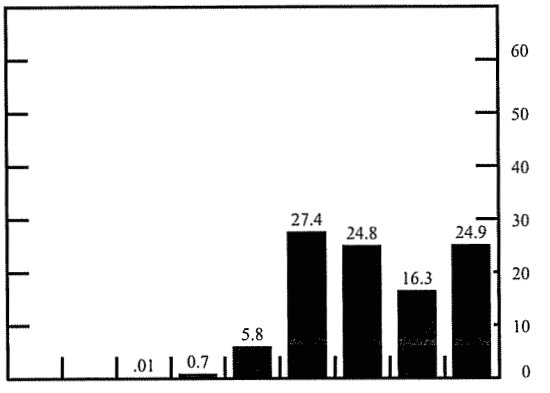


By volume

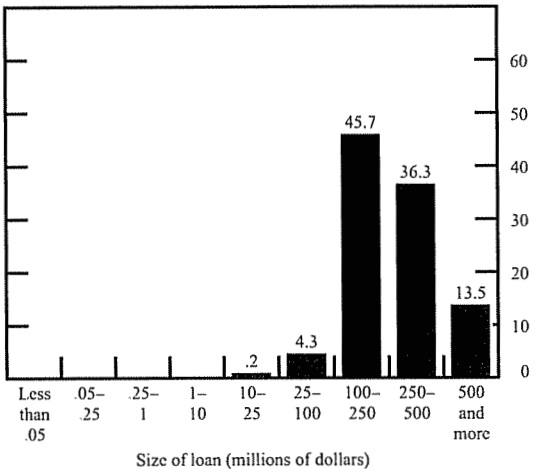
3. Loans



5. Private placements



7. Public bonds



1. The samples of private placements and publicly issued bonds on which the charts are based include only issues by nonfinancial corporations and exclude medium-term notes, convertible and exchangeable debt, and asset-backed securities.

Numbers may not sum to 100 because of rounding.

computed by volume rather than number, large loans naturally accounted for a larger share (chart 3). The mean loan size was about $1 million. The 3.6 percent of loans for $10 million or more accounted for 58 percent of total loan volume. Although most are small, loans for as much as $100 million are not extraordinary.

In contrast, the median private placement issued by nonfinancial corporations in 1989 was $32 million, and the mean was $76 million (charts 4 and 5). None was less than $250,000 (compared with 70 percent of bank loans in that category). Most private placements were for amounts between $10 million and $100 million.[14]

The median public issue was $150 million, and the mean public issue was $181 million. Most public issues were larger than $100 million (charts 6 and 7). None was smaller than $10 million, and only 15 percent were smaller than $100 million.[15]

In interviews, market participants often remarked that the private market is cost-effective mainly for issues larger than $10 million, whereas the public market is cost-effective for issues larger than $100 million. The data are consistent with this assertion, as only 10 percent to 15 percent of private placements and underwritten public issues (excluding medium-term note issues) fall below the respective boundaries.

These cross-market patterns in size of financing are often attributed to economies of scale in issue size, that is, to declining costs to the issuer, including fees and interest costs, as issue size increases.[16] Such arguments are usually based on a perception that, holding all else constant, interest rates are lowest in the public market and highest in the bank loan market and on a perception that fixed costs of issuance are highest in the public market, smaller in the private market, and lowest in the bank loan market.[17]

An alternative, possibly overlapping explanation is that the three markets specialize in providing different kinds of financing to different kinds of borrowers and that relevant borrower characteristics are associated with issue size. In particular, borrowers of large amounts are often big and well-established firms that require relatively little initial due diligence and loan monitoring by lenders, whereas those borrowing small amounts often require much due diligence and monitoring. Thus, borrowers of small-to-moderate amounts usually must borrow in the private placement or bank loan markets, where lenders are organized to serve information-problematic borrowers, whereas those borrowing larger amounts usually can issue in the public market because they are not information problematic. As we show later in part 1, both explanations are important, but the second explanation is probably more important in determining the market in which a borrower issues debt.

Maturity and Prepayment Penalties

According to their maturity distributions, commercial and industrial bank loans tend to have relatively short maturities, private placements tend to have intermediate- to long-term maturities, and public bonds have the highest proportion of long maturities. In 1989, the median bank loan had a maturity of just over three months, and the mean maturity was around nine months (charts 8 and 9).[18] Almost 80 percent of loans had maturities of less than one year. When weighted by loan size, two-thirds of loans had maturities shorter than one month. In interviews, market participants often stated that banks seldom lend long term, even when the loan interest rate floats. They stated that loans in the three- to five-year range are not uncommon, five- to seven-year loans are less common, and loans longer than seven years are rare. These remarks are supported by the charts.

The distributions in the charts are for a nonrandom sample of *new* loans, not for loans on the

14. The nonfinancial straight debt subsample represented by chart 4 is fairly representative of all private placements, including convertible, mortgage-backed, and medium-term note issues. See appendix G.

15. These statistics do not imply that the total *number* of private placements or public issues exceeds the total *number* of bank loans larger than, say, $10 million. The number of new bank loans in any year is very large, so even a small fraction of new loans can be substantial.

16. See Bhagat and Frost (1986), Ederington (1975), and Kessel (1971). For a comprehensive list of studies on the patterns of underwriting fees, see Pugel and White (1985).

17. One problem with this explanation is that interest costs are not always lowest in the public market for all classes of borrower. This issue is discussed in more detail in the subsection "Type of Payment Stream and Yields." Another problem is that empirical evidence of a relation between yield and issue size within the public market is weak.

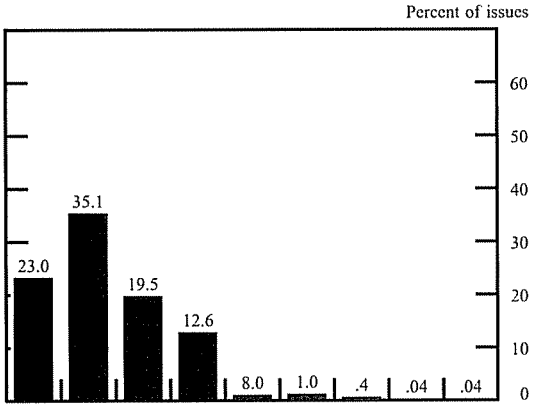
Interest rates may be higher in the private and bank loan markets for various reasons, one of which is that lenders must be compensated for the fixed costs of due diligence and monitoring they perform. Lenders charging no fees must demand a higher yield on smaller loans to recover such fixed costs.

18. Sources of data and details of the calculations that produced the maturity distributions appear in appendix G.

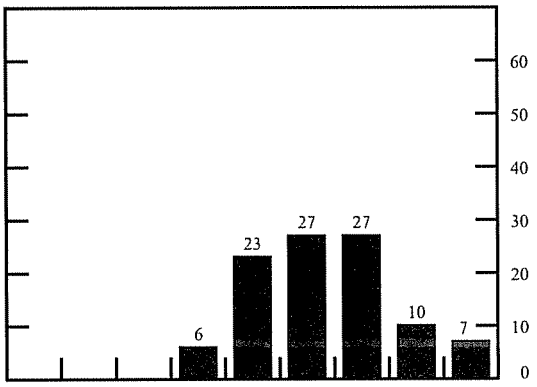
Distribution of maturities of debt instruments, 1989[1]

By number of issues

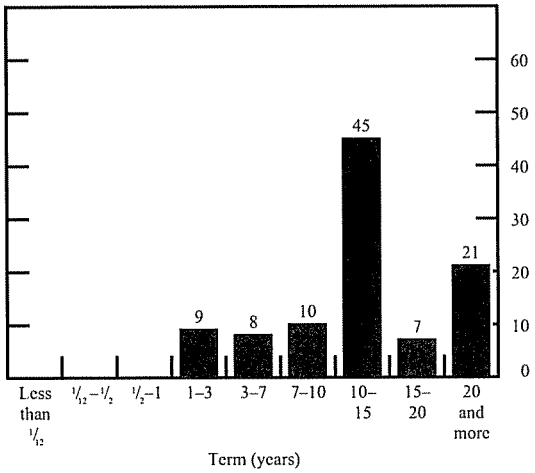
8. Loans



10. Private placements

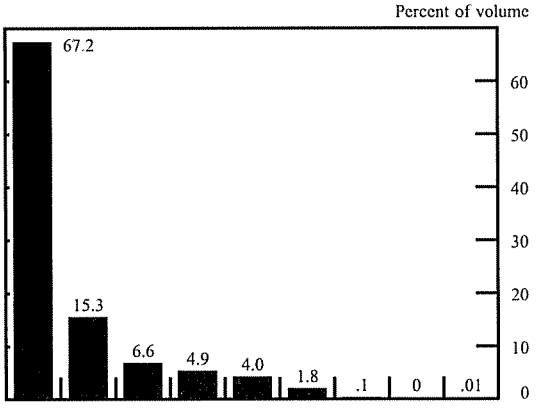


12. Public bonds

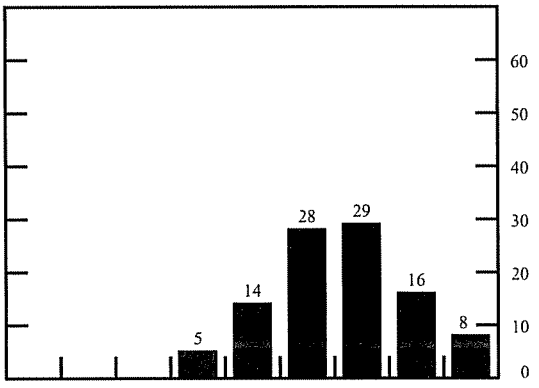


By volume

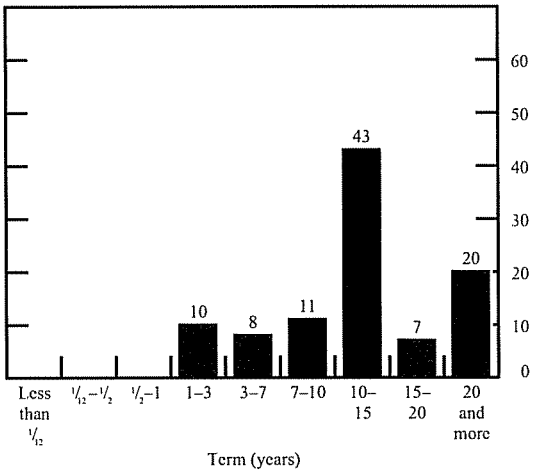
9. Loans



11. Private placements



13. Public bonds



1. The samples of private placements and publicly issued bonds on which the charts are based include only issues by nonfinancial corporations and exclude medium-term notes, convertible and exchangeable debt, and asset-backed securities.

Numbers may not sum to 100 because of rounding.

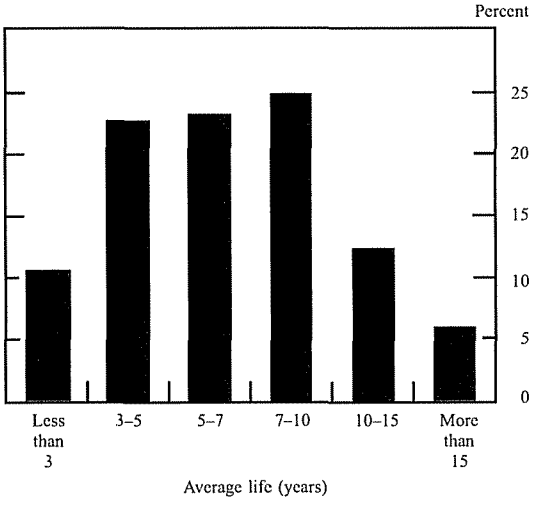
books. Because very short-term loans stay on the books for only a short time, a maturity distribution for a bank's portfolio of loans at a specific time would be less skewed toward the short end. Such a distribution, however, would probably still show banks to have relatively few loans with maturities longer than seven years.

Private placements are generally intermediate to long term (charts 10 and 11). In the sample, the median nonfinancial private placement had a maturity of nine years, and the mean maturity was also about nine years. No private placements had maturities shorter than one year.[19] A moderate fraction had intermediate maturities, but about two-thirds had maturities of seven years or longer.[20] The median average life of private placements is between six and seven years; many private placements include sinking fund provisions that cause their average lives to be significantly shorter than their maturity (chart 14).[21]

Nonfinancial corporate bonds issued in the public market tend to have long maturities (charts 12 and 13). The median maturity of our sample of bonds issued in 1989 was ten years, and the mean maturity almost thirteen years. Only 17 percent had a maturity of less than seven years. The median average life of public bonds was around ten years.

From the standpoint of financial theory, this cross-market pattern of maturity distributions is a bit of a puzzle. Even if long-term borrowers have a strong preference for fixed rates, banks could in principle make long-term, fixed-rate loans and execute swaps to obtain payment streams matching their floating rate liabilities. Apparently, however, they seldom do so. One explanation may be that the cost of swaps and other hedges is sufficient to make such loans unattractive to banks. Another possibility is that the different markets tend to serve borrowers that require different amounts of credit evaluation and monitoring and that in equilibrium such differences are responsible for cross-market patterns in many contract terms, including maturities.

14. Distribution of average lives of fixed-rate private placement commitments measured as a percentage of the total value of new private commitments by major life insurance companies, January 1990–July 1992



SOURCE. American Council of Life Insurance.

Privately placed debt contracts almost always include strong call protection in the form of punitive prepayment penalties.[22] As discussed in section 4, buyers of private placements usually fund their purchases with long-term, fixed-rate liabilities, and call protection is an important part of their strategy for controlling interest rate risk. Prepayment penalties in the private market generally require the issuer to pay the present value of the remaining payment stream (principal plus interest at the contracted rate) at a discount rate equal to the Treasury rate plus some spread, frequently 50 basis points, but sometimes even zero. The discount rate for a nonpunitive call-protection provision includes a risk premium

19. A few private placements may have maturities shorter than a year. The methods used to collect the sample may have caused private placements with such maturities to be omitted.

20. The maturity distribution was similar when all private placements were included in the sample (see appendix G).

21. Descriptive information included with a sample of private placements obtained from Loan Pricing Corporation indicated that about 45 percent of the sample placements had amortizing features that made their average lives shorter than their maturity. This estimate of the fraction of private placements that amortize is probably low because other placements in the sample may have been amortizing but not recorded as such. About 11 percent of the volume of publicly issued bonds in 1989 was amortizing.

22. For a 1991 sample of private placement commitments made by life insurance companies, 20 percent of privately placed bonds were noncallable, and another 70 percent included punitive prepayment penalties. Statistics presented in Kwan and Carleton (1993) indicate prepayment penalties may have appeared in private placements only recently. Their data indicate that as recently as 1985–86, only a small percentage of private placements carried prepayment penalties. However, during periods when prepayment penalties were not common, most private placements were noncallable until their average life was reached. Prepayment penalties reportedly became more common at the behest of investors, who profit from prepayments by borrowers wishing to escape the confines of restrictive covenants.

similar to that of the security itself (that is, associated with the credit quality of the security). When the discount rate fails to include a sufficiently high premium, the lender realizes an economic gain if the security is prepaid, even if the security is matched with liabilities of equal duration.

In the past decade, publicly issued bonds have included increasing call protection. Crabbe (1991a) presents statistics indicating that 78 percent of public bonds issued in 1990 were noncallable for life, whereas only 5 percent of those issued in 1980 were noncallable.[23] Bank loans are typically prepayable at any time at par.

Types of Payment Stream and Yields

Most bank loans carry floating interest rates, whereas most private and public bond issues carry fixed rates. Only 3 percent of commitments by major life insurance companies to purchase private placements from January 1990 to July 1992 carried floating rates. Only 95 of the 1,588 private placements of debt recorded in the Investment Dealers Digest (IDD) database for 1989 are listed as having floating rates.[24] The 95 represented 6 percent of issues and accounted for 14.3 percent of volume. However, many of the floating-rate financings in the IDD sample may, in effect, have been bank loans, so the latter statistics probably substantially overstate the fraction of private placements with floating rates.[25] About 5 percent of the volume of public bonds issued in 1989 had variable rates.

Publicly available data on private placement yields in recent years are limited.[26] However, many market participants stated that the yield spreads over Treasuries on traditional investment-grade private placements are higher than the spreads for publicly issued bonds with similar credit risk. The average differential between private and public spreads varies over time, but participants spoke of a range of 10 to 40 basis points. The differential is often called a liquidity premium, but it must also compensate lenders for any costs of credit evaluation and monitoring. The term *credit analysis premium* might be more appropriate.

Some market participants noted that spreads on investment-grade private placements are occasionally lower than those on comparable publics for very brief periods, up to a few days. They attributed this difference to slower adjustment of the private market to changes in the yield curve.

Spreads on below-investment-grade private placements have often been below those on comparable public junk bonds. Investors may demand larger risk premiums on public junk bonds because employing the risk control technologies of lender due diligence and loan monitoring is more difficult in the public markets or because comparatively rated public issues actually are riskier.

Several researchers have examined the relation between issuer quality and yield spread in alternative markets by focusing on the difference between the private placement and the public bond markets. For the 1951–61 period, Cohan (1967) found that the spread between yields on private placements and yields on public bonds rose as the credit quality of the issuer increased. Thus, the private placement market was relatively more attractive for lower quality credits. In a study that controlled for the restrictiveness of covenants, Hawkins (1982) confirmed this result for the period 1975–77.[27] These results are consistent

23. Most of the change in callability occurred for investment-grade bonds. During 1987–91, about 90 percent of new issues of below-investment-grade bonds were callable at some time or under some circumstances. See Crabbe and Helwege (1993) for more details. Crabbe (1991a) found that public bond yields were negatively related to the degree of call protection.

24. These statistics are for all placements in the IDD database, not just issues of nonfinancial corporations. If the same sample of nonfinancial business nonconvertible debt that was the basis of issue-size and maturity statistics is used, 4.5 percent of the number and 13.8 percent of the volume have floating rates.

25. The IDD database was obtained from IDD Information Services. The data on insurance company commitments are from the American Council of Life Insurance. In a database of bank loans and private placements produced by Loan Pricing Corporation, many of the transactions listed as private placements and as having floating rates involved only commercial banks as lenders, providing further evidence that the IDD sample overstates the fraction of placements with floating rates.

26. See part 3, section 1, for charts of a few yield series.

27. Shapiro and Wolf (1972) argue that the relationship between the private–public spread and quality is positive because private securities have more restrictive covenants, particularly at the lower quality levels. However, Hawkins (1982) found no relation between covenant restrictiveness and quality for his sample of private placements. Hawkins's result is an anomaly; other research and our interviews support the view of a positive relationship between the private–public spread and credit quality, at least until the recent credit crunch in the below-investment-grade sector of the private placement market. However, no empirical test has been adequate to support or disprove Shapiro and Wolf's contention that the positive relationship was due strictly to differences in covenant

with our discussions with market participants, who indicated that the public market tended to have relatively little appetite for small-sized, low-quality issues. However, this statement does not necessarily hold for larger-sized, low-quality securities. The development of the junk bond market in the 1980s produced a competitive public market for large, non-investment-grade bonds. Thus, Cohan's and Hawkins's findings may not hold for larger issues in the second half of the 1980s. Moreover, the credit crunch in the below-investment-grade sector of the private placement market since mid-1990 has led to a significant increase in the average spreads for below-investment-grade private placements of all sizes.

Variety of Securities

A wide variety of securities, including secured, unsecured, asset-backed, senior, and subordinated, is issued in the private placement market. Table 2 lists the different types appearing in the IDD database for 1989, with the number of issues and the volume for each type.

Covenants

Loans to information-problematic borrowers, which are typically medium-sized or smaller borrowers, generally have tighter covenants than loans to less-information-problematic borrowers. Covenants are one mechanism that lenders can use to reduce the likelihood of borrowers' taking actions that might lead to an expropriation of wealth from lenders. In the absence of covenant restrictions, smaller borrowers are, on average, more likely to attempt such expropriations. They often have less to lose in terms of reputation and are typically more information-problematic so that detection and control of expropriation attempts are more difficult for lenders. Thus, the more information problematic the borrower, the larger the number and the tighter the nature of covenants by lenders. Stated differently, lenders offer smaller, more problematic borrowers lower interest rates in return for tighter covenants, and thus such borrowers are more willing to negotiate debt contracts that include tight covenants. Moreover, without such covenants, lenders might refuse to make loans to such borrowers regardless of the interest rate.

Covenants in any debt contract are either affirmative covenants, negative covenants, or financial covenants (which are a subset of negative covenants). Affirmative covenants require a borrower to meet certain standards of behavior. They include requirements that the firm stay in the same business and meet its legal and contractual obligations. They are common in public bonds, private placements, and bank loans. Negative covenants restrain the borrowing firm from taking actions that would be detrimental to the bondholders. They include restrictions on capital expenditures, on the sale of assets, on dividends and other payments, on the types of investments that the firm can make, on the amount of additional debt that the firm can incur, on liens that the firm can give to other lenders, and on merger and acquisition activity.[28]

Financial covenants restrict measurable financial variables and can stipulate, for example, minimums to be maintained on capital, the ratio of assets to liabilities, working capital, current ratio (current assets/current liabilities), or the ratio of earnings to fixed charges.[29] A financial covenant can be either a maintenance covenant or an incurrence covenant. With a maintenance covenant, the criterion set forth in the covenant must be met on a regular basis, say at the end of each quarter. With an incurrence covenant, the criterion must be met at the time of a prespecified event, such as the firm's making an acquisition or incurring additional debt.

The number and the tightness of negative and especially financial covenants in private placements are associated with the quality of the issuer, that is, with the degree of both its information problems and its observable risk. Tightness refers to the likelihood that a particular covenant will be binding in the future. Private placements for lower-quality issuers often include many financial covenants.[30] Contracts for moderately risky issuers often include only one or two financial covenants with minimum values farther from current values

protection between the markets. Our discussions with market participants suggest that, until the recent crunch, the private placement market was generally more receptive than the public market to small-sized, lower-grade issuers.

28. Appendix E contains a review of the empirical economic literature on covenants.

29. Fixed charges are interest expense plus rental payments, required repayments of indebtedness, and preferred stock dividends.

30. Issuance of private placements involves several legal documents, including the securities themselves and a companion "securities purchase agreement." Many of the terms of the transaction, including covenants, are specified in this agreement. See the section on agents (part 2, section 2) for a more complete list of the documents involved in a transaction.

2. Types of private placement debt issue in the 1989 IDD database

Type	Number issued	Distribution by number issued (percent)[1]	Volume (millions of dollars)	Distribution by volume (percent)[1]
Adjustable-rate notes	2	.13	611.7	.53
Bonds	19	1.20	532.9	.46
Capital bonds	3	.19	102.6	.09
Capital notes	3	.19	185.0	.16
Collateralized mortgage bonds	8	.50	299.0	.26
Collateralized notes	1	.06	155.0	.14
Conditional sale agreement	2	.13	76.4	.07
Convertible subordinated debenture	2	.13	68.0	.06
Convertible subordinated notes	4	.25	20.0	.02
Debentures	4	.25	102.0	.09
Debt securities	169	10.64	11,587.0	10.10
Discount debentures	1	.06	264.3	.23
Equipment trust certificates	18	1.13	1,017.5	.89
First mortgage bonds	62	3.90	3,017.3	2.63
First mortgage financing	6	.38	499.8	.44
First mortgage notes	16	1.01	986.6	.86
Floating-rate notes	51	3.21	5,933.6	5.17
Floating-rate secured notes	1	.06	26.5	.02
Floating-rate senior notes	3	.19	349.0	.30
General mortgage bonds	4	.25	38.8	.03
Guaranteed bonds	1	.06	5.0	.00
Guaranteed notes	12	.76	2,986.4	2.60
Guaranteed participation certificates	4	.25	106.4	.09
Guaranteed pass-through certificates	4	.25	69.5	.06
Guaranteed secured notes	2	.13	113.5	.10
Guaranteed senior notes	5	.31	941.5	.82
Guaranteed subordinated notes	1	.06	150.0	.13
Industrial development bonds	5	.31	25.0	.02
Industrial revenue bonds	1	.06	10.0	.01
Junior subordinated notes	7	.44	173.1	.15
Lease-backed notes	3	.19	359.6	.31
Lease certificates	2	.13	161.9	.14
Lease financing	15	.94	1,220.2	1.06
Leveraged lease financing	27	1.70	1,938.6	1.69
Leveraged lease notes	3	.19	523.1	.46
Medium-term notes	20	1.26	535.7	.47
Mortgage-backed bonds	1	.06	225.0	.20
Mortgage-backed notes	4	.25	631.0	.55
Mortgage bonds	3	.19	79.4	.07
Mortgage financing	11	.69	1,005.7	.88

and thus less likely to be violated. Highly rated issues (A or better) usually have no financial covenants, unless their average life exceeds seven years, in which case an incurrence covenant on a debt ratio is often included. Most financial covenants in private placements are incurrence covenants, although occasionally one or two maintenance covenants may be included, especially when these are designed to match maintenance covenants in other debt of the issuer, such as bank loans.

Bank loan agreements typically contain only maintenance covenants. Financial covenants in bank loan agreements are reportedly generally tighter than in private placements, even for borrowers with the same characteristics. As with private placements, the number and the tightness of bank loan financial covenants depend on the quality of the issuer. Loans to small and medium-sized borrowers typically include many financial covenants. Very large companies, however, generally obtain bank loan facilities, frequently in the form of unfunded loan commitments, without meaningful financial covenants.

Indentures in publicly traded bonds, even for below-investment-grade bonds, generally contain no financial covenants. Beginning in 1992, however, some public junk bonds included financial covenants, especially debt ratio and interest coverage covenants. Market participants

2. Continued

Type	Number issued	Distribution by number issued (percent)[1]	Volume (millions of dollars)	Distribution by volume (percent)[1]
Mortgage notes	37	2.33	2,451.4	2.14
Nonrecourse secured notes	6	.38	143.2	.12
Notes	130	8.19	14,832.7	12.94
Other certificates	3	.19	64.7	.06
Participating certificates	8	.50	241.6	.21
Participating notes	1	.06	97.0	.08
Pass-through certificates	26	1.64	1,171.9	1.02
Project financing	7	.44	799.2	.70
Promissory notes	2	.13	125.9	.11
Receivable-backed certificates	15	.94	2,959.5	2.58
Sale-leaseback financing	1	.06	146.5	.13
Second mortgage financing	5	.31	73.8	.06
Secured bonds	2	.13	195.0	.17
Secured loan certificates	3	.19	118.2	.10
Secured notes	111	6.99	6,366.4	5.55
Secured promissory notes	1	.06	1.4	.00
Secured term loan	1	.06	55.5	.05
Senior debentures	6	.38	505.7	.44
Senior extendable notes	1	.06	100.0	.09
Senior mortgage notes	1	.06	10.0	.01
Senior notes	481	30.29	27,026.4	23.57
Senior secured bonds	5	.31	491.3	.43
Senior secured notes	46	2.90	3,705.1	3.23
Senior subordinated extendable notes	1	.06	180.3	.16
Senior subordinated variable-rate notes	6	.37	1,307.0	1.14
Senior subordinated debentures	6	.38	842.5	.73
Senior subordinated notes	77	4.85	4,624.2	4.03
Subordinated bonds	1	.06	16.0	.01
Subordinated capital debentures	1	.06	15.0	.01
Subordinated debentures	10	.63	655.6	.57
Subordinated floating notes	1	.06	105.0	.09
Subordinated notes	72	4.53	2,967.7	2.59
Subordinated secured notes	1	.06	50.0	.04
Subordinated variable-rate notes	2	.13	5,000.0	4.36
Variable-rate notes	1	.06	89.1	.08
Total	**1,588**	**99.94**	**114,668.4**	**99.96**

1. Numbers may not sum to 100 because of rounding.

disagree on whether this development is permanent or transitory. Some participants assert that such issues were bought by investors that did not fully understand the nature of the monitoring and renegotiation activities associated with their purchases and that these investors will stop buying such issues at some future time. Others assert that such issues are, in effect, illiquid and were bought by mutual funds with staffs of credit analysts, making the instruments functionally equivalent to below-investment-grade private placements. This difference of opinion may not be resolved until some of the securities deteriorate in quality and must be renegotiated.

Covenants and Renegotiation

Covenants can limit a borrowing firm's flexibility in financial and strategic policymaking. The constraint on flexibility can, however, be relaxed through implicit or explicit provisions for contract renegotiation, thus increasing borrowers' willingness to accept tight covenants. For example, if the pursuit of a new strategy, such as the acquisition of another firm, would violate an existing covenant, the borrower may request that the debt contract be renegotiated. It might, for example, request a waiver of the covenant. The lender analyzes the effect of the new strategy, and if the

lender can establish that it will improve the prospects of the firm without increasing the risk to the lender, the lender may agree to waive or adjust the covenant. Even if the new strategy increases the risk of the loan as it is presently structured, the lender may grant a waiver if the borrowing firm agrees to adjust other terms of the debt contract. In effect, banks, insurance companies, and other lenders to information-problematic borrowers offer contracts that limit borrower incentives to take risks and still permit flexibility through contract renegotiation. They can offer flexible contracts because of their ability to monitor and analyze borrowers.

One reason information-problematic firms seldom borrow in the public market is that the benefits of covenants are hard to capture there because diffuse ownership makes them difficult to renegotiate. Knowing that renegotiation with many lenders is very costly, public bond issuers are willing to include at most a few loose covenants. Because many covenants are not feasible in public debt, much of the monitoring technology of information-intensive lenders is not useful for public debt, as public bond buyers may have no legal mechanism for controlling excessively risky borrower behavior even if they detect it. Thus many information-problematic firms are unable to borrow in the public market.

This discussion implies that bank loans, private placements, and public bonds will differ not only in the number and the tightness of covenants, but also in the frequency with which the covenants are renegotiated. As noted, the covenants in bank loans are often relatively tight, implying a high frequency of renegotiation because bank borrowers start closer to the limits in their covenants.[31] Those covenants that do appear in publicly issued bonds are relatively loose, implying a low frequency of covenant renegotiation. Private placement covenants and renegotiation rates fall between the two extremes but are generally closer to those of bank loans. The covenants in a private placement are typically violated several times during the life of the security, requiring several waivers or other renegotiations of terms (see Zinbarg, 1975, and Kwan and Carleton, 1993).[32]

Including extensive, customized covenants is possible in private placements and commercial loans partly because both are negotiated debt instruments. Issuers and lenders can tailor contract terms in a way that satisfies the objectives of both as much as possible.[33] Publicly issued bonds, which are underwritten without any direct negotiation between the issuer and the investors, are seldom customized.

Collateral

Some private placements are asset-backed securities, such as leveraged leases, collateralized trust certificates, and collateralized mortgage obligations. Also, a significant fraction of traditional private placements of straight and subordinated debt, such as first and second mortgage bonds, are secured. Approximately one-third of the private placements in Kwan and Carleton's sample were secured. Similarly, 6 percent of the volume of private issues in 1989 was asset-backed, and 21 percent was otherwise secured, for a total of 27 percent secured (see table 2).[34] Asset-backed securities are more common in the public market, whereas collateral is much less common in other forms of public debt. In 1989, 24 percent of public issuance was asset-backed, and only 4 percent was otherwise secured.[35] A much larger fraction of bank loans is secured. Statistics from the Federal Reserve's Survey of Terms of Bank Lending and the Federal Reserve/Small Business Administra-

31. Here we refer to the typical middle-market commercial bank loan, in which only one bank or a few banks are involved in the credit. The large syndicated bank loans, which may involve many banks, may be much more like public securities with respect to covenant tightness and renegotiation (see El-Gazzar and Pastena, 1990).

32. In the final section of part 1, we argue that the frequency of renegotiation is not determined simply by the degree of covenant tightness. The combination of renegotiation and covenant tightness may be related to borrower quality.

Kwan and Carleton present evidence that roughly half of a sample of private placements were modified at least once; most modifications occurred while the loans were in good standing.

33. All of the terms, including the rate, prepayment penalty, take-down provisions, maturity, and covenants, are typically negotiated in a traditional private placement; however, a major focus of most negotiations is the nature of the covenants.

34. The fraction secured rises to 31 percent if floating and variable rate instruments, "loans," industrial revenue or development bonds, and medium-term notes are omitted from the computations. The IDD sample results probably understate the percentage of private placements with collateral attached, because collateral status must be inferred from listed security type. Kwan and Carleton's finding that about one-third of private placements have collateral is probably the best available estimate.

35. Federal National Mortgage Corporation (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac) obligations were not included in the computations yielding public market percentages.

tion's National Survey of Small Business Finance indicate that about two-thirds of commercial bank loans to nonfinancial businesses are secured.[36]

Conventional wisdom suggests that bank loans frequently involve collateral because bank borrowers are relatively risky; collateral is less often used in the private placement market because private placements tend to be less risky on average than bank loans; and collateral is infrequently used in the public debt market because of the high quality of the average issuer. As we argue in the last section of part 1, collateral is useful not only for controlling observable risks but also for solving information problems. Collateral in debt contracts helps minimize the incentives of firm owners to act in ways that are detrimental to lenders. Because these incentives are more acute in smaller, more information-problematic firms, collateral is widespread in the bank loan market but rare in the public bond market.[37]

Summary

Bank loans typically have floating rates and short- to intermediate-term maturities and are relatively small and prepayable at par. They tend to include relatively tight financial covenants and thus must frequently be renegotiated.

Private placements typically have fixed rates and intermediate- to long-term maturities, are moderately large, and include punitive prepayment penalties. Many include financial covenants. Though these covenants are usually looser than those in bank loans, and thus are less easily violated, a typical private placement is renegotiated at some point. A significant number of private placements include no financial covenants, and thus renegotiation is less frequent for them.

Publicly issued bonds are typically fixed-rate, long-term, large loans. The presence of prepayment penalties and other call protection has varied over time. They seldom include financial covenants and are seldom renegotiated.

Individual lenders and borrowers take this cross-market pattern of terms as given and choose the market(s) with preferable terms. The next section explains why borrowers choose the private placement market, and section 4 explains why lenders do so.

3. Borrowers in the Private Placement Market

Borrowers in the private placement market generally fall into one or more categories (table 3). Most are information-problematic firms or, if they are not, their financings are complex enough that only information-intensive lenders will be willing to buy them. Others have specialized needs that are a disincentive to public issuance, such as a desire to avoid the disclosure associated with registration. Finally, some have issues too small to be done cost-effectively in the public market.[38]

Firms that are not information problematic and that want to issue nonproblematic securities in large amounts generally borrow in the public markets. Those wishing to borrow for short terms or at floating rates generally borrow from banks (or similar intermediaries, like finance companies) or issue commercial paper. Some firms with a preference for long-term and fixed-rate funds, other things equal, may nevertheless end up borrowing for short terms and at floating rates from banks.

In describing U.S. capital markets, market participants often speak of a hierarchy of borrowers and debt markets based on a concept of borrower access. In this hierarchy, nonproblematic firms with nonproblematic issues can borrow in any market; and, for any given financing, they choose the market offering the best terms. Information-problematic firms or issues, however, effectively have no access to the public markets, because public market lenders are not prepared to perform the necessary due diligence and monitoring. Moderately problematic firms may borrow in either the bank or the private placement market, whereas very information-problematic firms must use the bank loan market or cannot issue any outside debt (that is, they may be able to borrow only from those with ownership interest).

36. A distinction should be made between bank credit facilities extended to large and those extended to small firms. Large firms with access to the commercial paper market and the public bond market obtain their bank credit facilities (usually lines of credit backing up their commercial paper) on an unsecured basis. However, of those borrowers that depend on commercial banks for their funding, the majority borrow on a secured basis. These borrowers drive the statistics reflected in the Survey of Terms of Bank Lending and the National Survey of Small Business Finance.

37. There is also empirical evidence that within the bank loan market riskier borrowers are more likely to pledge collateral (see Berger and Udell, 1990, 1993a, and 1993b).

38. Table 3 is intended as a summary of our characterization of private market borrowers; in no way is it intended as a complete representation of all borrowers or capital markets. For example, it does not include the decisions of borrowers desiring short-term, fixed-rate loans or long-term, floating-rate loans.

3. A taxonomy of market choices of borrowers

Type of borrower and issue	Type of loan borrower wants[1]	
	Long-term, fixed-rate	Short-term, floating-rate[2]
Information-problematic firm		
Moderately problematic	Private placement	Bank loan
Very problematic	Bank loan[2,3]	Bank loan
Non-information-problematic firm with information-problematic issue or transaction	Private placement	Bank loan
Firm with specialized needs (e.g., speed)	Private placement or bank loan[2,3]	Bank loan
Non-information-problematic firm with small nonproblematic issue	Private placement or bank loan[2,4]	Bank loan
Non-information-problematic firm with large nonproblematic issue	Public bond	Bank loan or commercial paper

1. Though a borrower may prefer a long-term, fixed-rate loan, in some cases it may choose or be forced to accept a short-term, floating-rate loan. This situation is especially likely for very information-problematic borrowers.

2. "Bank loan" includes any short-to-intermediate-term, floating-rate loan by any of a number of information-intensive intermediaries, such as commercial banks or finance companies.

3. Very problematic borrowers may be forced to choose a short-term or floating-rate loan because they lack access to the private placement market, even though in principle they may prefer a long-term, fixed-rate financing. Firms with very specialized needs may find even the private placement market unable to meet those needs and may turn to the bank loan market.

4. Firms wishing to borrow small amounts (less than around $10 million) may choose a bank loan instead of a private placement to avoid fixed costs of issuance associated with the placement.

From a broad economic perspective, this hierarchy and the differential access of borrowers are not exogenous restrictions on borrowers' actions but are features of an economic equilibrium that is the outcome of choices by both borrowers and lenders. For example, in principle information-problematic borrowers could issue securities publicly, and public bond market lenders could acquire the expertise needed to perform due diligence and loan monitoring. In reality, however, the choices of lenders and borrowers have resulted in an equilibrium in which information-problematic firms and financings rarely appear in the public markets (see section 5 for an analysis of the economic forces resulting in this equilibrium). In this section, we employ the concepts of access and of a hierarchy of borrowers because they are practical and simplify exposition when the focus is on borrowers alone, taking lenders and the broad market structure as given. We emphasize, however, that the current pattern of access is not set in stone but could change if the economic fundamentals changed.

The set of firms with access to the private market but not to the public market is not the same as the set of private market borrowers. Some private issues are by companies that have access to the public market but choose the private market for special reasons. Similarly, by asserting that very information-problematic firms typically must borrow from banks, we do not mean to imply that all bank borrowers are problematic. In fact, banks serve a wide variety of borrowers.

In the remainder of this section, we explain the taxonomy in table 3 in more detail and then present supporting empirical evidence. The evidence suggests that, as a group, firms with access only to the bank loan and private placement markets differ in several respects from those that have access to the public bond market. Most notably, the average borrower in the former group is significantly smaller than the average issuer in the public bond market. Smaller-sized issuers are often more information problematic and thus must borrow in an information-intensive market. Similarly, firms with access only to the bank loan market are significantly smaller and more information problematic than those having access to the private placement market. Another difference is that the private placements of companies issuing in both the public and the private markets tend to be considerably larger and more complex than private placements issued by companies that borrow only in the private market.

Our principal explanation for these facts involves economic theories centered on asymmetric information, but at least two other explanations are possible. One is that small firms tend to issue in small amounts and differential fixed costs of issuance make the net cost of obtaining funds for relatively small issues lower in the private market. Another possibility is that smaller firms tend to have higher observable risk (defined in part 1, section 1) and different classes of lending institution may have different incentives to take risks. Mispriced deposit insurance may give banks the largest incentives to take risks, whereas the absence of any guarantees may give public bond buyers the smallest. State guaranty associations for life insurance companies, which offer policyholders some protection if their insurer fails, provide intermediate incentives.[39]

The three explanations of market choice are not necessarily mutually exclusive. The evidence offers most support for the explanation centered on differences in information problems across firms, some support for differential fixed costs of issuance as a decisive factor in some cases, and little support for the explanation centered on differences in observable risk across firms. The two most important weaknesses of the third explanation are that contract terms (especially covenants) are systematically different in the public and private markets for firms with the same bond rating and that enlarging the set of lending institutions under consideration reveals inconsistencies.[40] Finance companies, for example, enjoy no guarantees similar to deposit insurance and yet reportedly lend mainly to high-risk borrowers. All of the evidence is consistent with the view that the private market normally receives issues that require lender due diligence or loan monitoring. Our characterization of and explanation for the hierarchy thus focuses on differences in information problems.

Issuers in the Private Placement Market

Most private placements carry fixed interest rates and are of intermediate- to long-term maturity. Because firms generally find short-term and floating-rate loans no harder to obtain than long-term, fixed-rate loans (for reasons described in section 5), we infer that private issuers prefer a fixed rate and a long term.[41] In this study, we do not analyze firms' reasons for seeking long-term, fixed-rate debt financing. Commonly cited motivations include a desire to reduce the uncertainty associated with interest rate fluctuations or with funding long-term investments with short-term loans.

4. Distribution of private issuers, by type of industry, 1989[1]

Percent

Industry type	Distribution	
	By volume of issuance	By number of issues
Nonfinancial	55	50
Financial	30	30
Utilities	6	6
Government	1	2
Unknown	8	11

1. Numbers may not sum to 100 because of rounding.
SOURCE. IDD Information Services.

Broad Industry Types of Issuers

Most issuers of private placements are nonfinancial businesses or financial institutions (table 4). In 1989, businesses accounted for 61 percent of the total volume of private placements and financial institutions for 30 percent. State and local governments were responsible for only thirty-one issues in 1989, and only four were for more than $25 million.

Information-problematic Firms

Borrowers that are information problematic have access to the bank loan market for working capital and intermediate-term loans, but normally they

39. The cross-guarantee arrangements differ by state. See Brewer, Mondschean, and Strahan (1993) for more details.

40. If bond ratings are a measure of observable risk and observable risk is the key factor in market access, the contract terms for debt with the same bond rating should be similar across markets.

41. Bank borrowers, however, may not necessarily prefer a short term and a floating rate. Quite information-problematic borrowers may prefer a private placement to a bank loan at terms apparently generally available in the two markets, but they may be able to issue privately only on terms much worse than average because control of moral hazard risks becomes more difficult the longer the term of the loan. Effectively, such firms lack access to the private market and, in spite of their preference for long terms and fixed rates, must borrow in the bank loan market.

cannot obtain longer-term financing in the public bond market, as buyers of publicly offered bonds generally do not devote staff and other resources to the credit analysis required for investment in these companies. Investors in private placements, however, have developed the necessary capacity for initial due diligence and loan monitoring and have achieved economies of scale enabling them to offer favorable borrowing terms to information-problematic firms.

The information problems that borrowers pose for lenders span a spectrum. A firm's position on this spectrum tends to be correlated with both its size and its observable credit risk. Information problems posed for lenders tend to increase as borrower size decreases partly because smaller firms enter into fewer externally visible contracts with employees, customers, and suppliers. Larger firms enter into more contracts and larger dollar volumes of contracts. The terms of these contracts, and the large firms' performance under them, are generally observable at relatively low cost; for example, they are often reported in the financial press. Facts about contract performance reveal information about a firm's likely future performance, and when such facts are widely available, a firm will find building a reputation for good performance easier. In general, the larger the costs to a firm of losing its good reputation, the smaller the agency problems that must be managed by its lenders.[42]

Size may also be related to information problems because size is correlated with age. Younger firms, which tend to be smaller, generally have not yet had time to acquire a reputation.[43] Similarly, observable credit risk may be positively correlated with information problems because risk is correlated with age.[44] Younger firms tend to be riskier because they may not yet have achieved organizational stability and the marketability of their product lines may not be well established. Risk may also be associated with information problems because the incentive to engage in behavior that expropriates wealth from lenders is more acute in observably riskier firms.[45]

Most issuers of private placements are medium-sized firms and can be described as only moderately problematic. Very problematic, typically small borrowers usually lack access to the private market, where lenders' capacity for due diligence and especially for monitoring is often not as high as that of banks and some other lenders. Such borrowers may also be able to obtain better terms in the bank market. A bank loan generally contains more restrictive covenants than a private placement, has a considerably shorter maturity, and involves more monitoring by the bank. Consequently, smaller companies borrowing from banks are, in effect, issuing a safer security than they would have issued in the private placement market and can thus obtain a lower rate.[46] The shorter maturities, tighter covenants, and floating rates may make bank loans less-than-perfect substitutes for private placements for such companies, but such terms may be preferable to no loan at all or to a loan with a very high interest rate.

Extremely problematic borrowers, such as start-up or very small firms, may be unable to issue outside debt, especially straight debt, and may be forced to rely on equity financing. Sources of long-term funding for such companies include equity funds, mezzanine debt funds, and venture capital funds. These sources are particularly attractive to firms that are unable to provide collateral for an intermediate-term bank loan. Equity and mezzanine debt funds typically extend financing through a combination of subordinated debt and equity. The principal difference between the two is that equity funds usually require a larger equity interest—often in excess of 20–25 percent. Venture capital funds typically invest in developing companies and require an

42. Shockley and Thakor (1993) provide evidence on the relation between firm size and information problems. They examined the announcement effects of bank loan commitments obtained by publicly traded firms and found that positive abnormal returns were higher for smaller firms. They interpret this result as evidence that the value of information produced by the bank decreased as borrower size increased, implying that smaller firms are more information problematic.

43. Other reasons for a relation between risk-taking behavior and the size of borrowing firms may exist. Recent research in finance implies that, because they tend to have diffusely held stock, larger firms are controlled more by their managers than by their shareholders. Because managers' human capital tends to be undiversified, they tend to adopt strategies that are less risky than would maximize shareholder wealth. Such a tendency offers some protection to bondholders as well.

44. Berger and Udell (1993b) found empirical evidence associating firm age and risk. In particular, they found that the risk premium on commercial loans is negatively associated with firm age.

45. See Boot, Thakor, and Udell (1991) for a model in which the acuteness of moral hazard is positively related to the level of observable firm risk.

46. In a world of perfect information, borrowers would be indifferent between a safer bank loan with shorter maturity and strict covenants and a riskier private placement with longer maturity, looser covenants, and a higher rate. However, the point of indifference may not be obtainable when borrowers have better information about their credit quality than lenders. In this circumstance, smaller borrowers may prefer the more monitoring-intensive credit offered by commercial banks to credit from insurance companies (see section 5).

equity interest. Again, these alternative sources, like bank loans, are not perfect substitutes for standard private placements, as they require the borrower to give up an equity interest in the firm. For many smaller, owner-managed firms, this may be a drawback.[47] However, equity funds may be the only source of financing for those firms too small or too risky even for the bank loan market.

Firms with Information-problematic Financings

Large, non-information-problematic firms with complex financing requirements have often used the private placement market. Such companies tend to issue straight debt in the public bond market but turn to the private placement market for complex transactions that public market investors are not well prepared to evaluate. Private placement investors have developed the specialized skills for analyzing the credit risk of these transactions and can command loan spreads sufficient to provide a satisfactory return on their services. Examples of such transactions are project financings, capitalized equipment leases, joint ventures, and new types of asset-backed securities. The private placement market often serves as a testing ground for new types of securities, which may eventually move to the public market as investors become more familiar with their structure and the methods for analyzing their credit risk. One frequently cited example is asset-backed securities, which reportedly originated in the private market but are now issued in the public market as well.

Firms with Specialized Needs

Another category of firms using the private placement market consists of borrowers that could issue in the public bond market—and in some instances have done so—but turn to the private market for reasons unrelated to the complexity of their financings. Included in this group are privately held U.S. companies and foreign companies that wish to preserve their privacy. Foreign issuers in the U.S. private placement market also avoid the conformance to U.S. generally accepted accounting principles that would be required if they issued in the public debt market. Corporations contemplating acquisitions or takeovers also have often relied upon the private placement market to protect the confidentiality of their transactions and thus decrease the likelihood of competing offers.

Many large companies have used the private placement market to raise funds when time is a factor. For example, when in 1989 the Congress significantly curtailed the tax advantages of issuing debt for Employee Stock Ownership Plans (ESOPs), many large firms sold large ESOP-related issues just before the new tax laws became effective (July of that year). More than $7 billion of ESOP notes were issued in the private market in June 1989. More generally, corporations have relied upon the private market when funds were needed before a time-consuming public registration could be completed.[48] Often these transactions are to finance acquisitions, and in many instances the issues are sold with registration rights, which places in interest rate penalty on the issuer if the securities are not registered publicly within a specified period of time.[49]

Another special circumstance leading firms to use the private market involves financings requiring nonstandard or customized features, such as delayed disbursements or staggered takedowns. In general, selling securities with such specialized terms in the public market is not possible, but investors in private placements often have the flexibility to accommodate issuers' preferences.

Firms with privately placed, medium-term note programs may also be considered a group that issues in the private market for reasons related mainly to regulatory and practical restrictions in the public markets. Medium-term notes have made up an increasing share of total private placement issuance over the past four years. In 1991, for example, medium-term note issuance totaled $6.2 billion, representing 8.3 percent of total private bond issuance. However, this amount was small relative to public medium-term note issuance in 1991, which totaled $73.5 billion. Most firms that have private, medium-term note programs are either private or foreign firms that issue no public securities or public firms that issue privately while waiting to establish a public program.

47. Another source of funding for smaller firms is an initial public offering (IPO). Again, this type of funding means giving up some ownership of the firm.

48. To a large degree, shelf registration, which has been possible since 1982, has eliminated this motivation to issue privately. For securities not sold under a shelf registration, however, the time to bring the offering to market is considerably longer than that for a private placement.

49. For this reason, these securities are often sold to typical public market lenders rather than to private market lenders.

Issue Size, Fixed Costs of Issuance, and Choice of Market

Besides information problems and regulatory requirements, fixed costs of issuance can affect a borrower's choice of market.[50] As noted in part 1, section 2, most private placements are for amounts between $10 million and $100 million. Focusing first on the tradeoff that can be decisive for issues around $100 million in size, issuance expenses are generally lower for private than for public securities, primarily because they are not registered with the SEC and because they are not are underwritten. Public issuers incur both registration and underwriting expenses. For large issues that are not information problematic, however, the higher fixed costs of a public offering are often offset by the availability of lower interest rates, which reflect the greater liquidity of public bonds and the smaller costs of credit analysis that public lenders bear. Consequently, a company that could issue in either market would find, all else being equal, that the choice hinged upon the size of the offering. For issues smaller than some size cutoff, lower issuance costs make the private market less expensive; for larger issues, lower yields make the public market less expensive. Currently, market participants place the break-even point for the two markets between $75 million and $100 million.[51]

At the other end of the spectrum, private placements below $10 million are relatively uncommon for three reasons. First, private placements involve some fixed costs of issuance, which can make total costs of small private issues high. Also, most buyers of private placements would demand high interest rates on small issues to cover their fixed costs of due diligence and loan monitoring. Finally, prospective issuers of small amounts tend to be smaller than the average private market borrower. Such issuers may be too information problematic for private market lenders, whose monitoring capacity is not so high as that of banks and some other lenders. Consequently, as noted above, small companies tend to rely on other sources of funds, one being the bank loan market. As in the private placement market, fees can cause the effective interest rates on bank loans to vary inversely with loan size; nonetheless, for most small borrowers, bank loans are preferable to private placements.[52]

Because mainly small and medium-sized companies are information problematic and because such companies typically borrow small or moderate amounts, differential fixed costs of issuance as well as the need for an information-intensive lender lead such companies to borrow in the private placement or bank loan markets rather than the public market. The most important factor in determining the market in which a firm issues, however, seems to be the extent of the information problems the firm poses for lenders.

Other Factors Influencing Market Choice

Apart from gaining access to credit markets through financial intermediaries, information-problematic firms often gain other advantages from issuing private placements. Borrowers have the opportunity to establish relationships with lenders, the terms of the securities can be tailored to some degree to suit the borrowers' needs, the advancement of funds can be staggered or delayed, and confidentiality concerning the borrowers' financial condition and business operations can be maintained. Restrictive

50. Fixed costs of issuance include fees paid to an agent or underwriter, legal and printing costs, and costs of registration (if any). Private issuers often hire agents to assist them with placements and must pay the agents' fees, but such fees are typically smaller than fees for a comparable underwritten public issue.

51. A thorough examination of economies of scale in the private placement market has not yet appeared. Blackwell and Kidwell (1988) found no evidence of economies of scale in the private market, but their study had several limitations (see appendix H). They also found no evidence of economies of scale in the public market. This finding stands in sharp contrast to research by Kessel (1971), Ederington (1975), and Bhagat and Frost (1986) and to conventional wisdom in the investment banking community. For a comprehensive list of studies on the patterns of underwriting fees, see Pugel and White (1985).

52. There is empirical evidence that such economies of scale in loan size exist in the commercial bank loan market. Berger and Udell (1990) suggest that the difference in pricing attributable to loan size between a $100,000 and a $1,000,000 commercial loan is 190 basis points. However, this result should be viewed as an upper limit because loan size in their model may be a proxy for risk not controlled for by other variables. In a subsequent study, Berger and Udell (1993b) found no evidence that size was a statistically significant predictor of loan prices when firm characteristics and contract terms were controlled for. However, the data set for that study was small and limited to firms with fewer than 500 employees that had relatively small loans. Several interpretations can be offered to reconcile these apparently conflicting results. Because the sample in Berger and Udell (1993b) was truncated, there may not have been enough variation to yield significance. Alternatively, economies of scale in loan size may be driven principally by large loans that were excluded from that study. Specific studies on the production function shed further light on the issue. Udell (1989) examined the loan review component of commercial bank loan department operations and found evidence of significant economies of scale in loan size.

covenants, however, impose costly restrictions on borrowers and thus are seen as a disadvantage. In addition, prepayment penalties eliminate borrowers' opportunity to refinance the bonds at a cost saving, regardless of the level of interest rates. Nevertheless, medium-sized or hard-to-understand borrowers in search of long-term, fixed-rate funds are often willing to trade off the risk control features of private bonds against their perceived benefits.

Evidence from Stock Prices

Previous studies of the reaction of stock prices to announcements that firms had placed bonds privately support the hypothesis that the private placement market is information intensive. In one study, Szewczyk and Varma (1991) hypothesize that, if a company is information problematic, its stock price should rise in response to the announcement of a private placement. Stock investors might view the private placement as a signal that the firm is more creditworthy inasmuch as institutions with access to private information are willing to invest in the firm. If stock investors view the successful placement of private debt as a signal that the firm is engaging in value-enhancing projects, they are likely to bid up the price of the firm's stock. In addition, stock investors may realize that the private placement probably results in the monitoring of the firm's management by additional lenders.

For a sample of public utility companies issuing private placements between 1963 and 1986, Szewczyk and Varma found that their stock prices, on average, significantly exceeded the predicted change after the announcement of a private placement. Moreover, the greatest positive response was shown by utilities that had not issued debt publicly, that is, those for which the least amount of public information would have been available. As a check on the results, Szewczyk and Varma also examined stock prices of utilities that had not placed debt privately. In response to the utilities' announcements of public debt offerings, the changes in their stock prices fell short, on average, of predicted changes.

Research by Bailey and Mullineaux (1989) and Vora (1991) also supports a conclusion that private placement issuers tend to be information problematic. In contrast, James (1987) and Banning and James (1989) find a negative stock price response, but it comes for private placements used to pay down bank loans. In such situations, the number of lenders monitoring management may not increase, and the intensity of monitoring might decrease. Taken as a whole, the results support a conclusion that private issuers are information problematic, but not as problematic on average as bank borrowers.

Differences among Firms Issuing in the Public, Private, and Bank Loan Markets

To summarize the preceding discussion, borrowers' access to debt markets is apparently closely related to firm size, with size mainly a proxy for the degree of information problems that borrowers pose for lenders. Broadly speaking, very information-problematic companies without collateral may be unable to borrow even from an information-intensive lender.[53] Such companies, which are typically small, may be forced to rely on venture capital or on other forms of equity finance. Small firms that are less information problematic or those that can provide collateral are confined largely to the bank and finance company loan markets for debt financing. Even less problematic firms, which are typically medium-sized, also have access to the private placement market. Large corporations can borrow in any of these markets and in the public bond market. Besides size of the firm, other characteristics, especially those related to the nature and size of the financing, are important in determining a firm's choice of credit market.

Empirical evidence supports these assertions. We analyzed the characteristics of firms classified according to a hierarchy of access to the public, private, and bank loan markets and found a pattern of firm sizes and other characteristics consistent with the explanation of borrowers' choice of market that focuses on the different information problems posed by different firms. However, borrower size is also correlated with issue size and with observable borrower risk, so the observed difference in sizes of firms with different levels of access is also potentially consistent with explanations based on issuance costs or risk. To evaluate the relative importance of the three explanations, we looked at several other firm characteristics that are plausibly correlated either with the degree of information problems or with observable risk.

53. The taking of collateral can be viewed as another mechanism (like covenants) that lenders use to control risks associated with information problems.

We employed an indirect approach in identifying the access of actual firms to the three markets, since access is not directly observable. We combined information on corporations in COMPUSTAT with data on private placements from the IDD database.[54] Corporations in COMPUSTAT with a long-term credit rating are assumed to have access to the public bond market, inasmuch as they must have issued corporate bonds at some time to have received a bond rating; those without a rating are assumed to lack access to the public market.[55] In 1989, 1,149 corporations in COMPUSTAT had ratings and thus constitute the public market group, that is, those corporations with the ability to raise funds in public debt markets.[56] To form a group of firms with access to the private placement market but not to the public market, companies listed in the IDD private placement database as issuing in 1989 were matched with those in COMPUSTAT that had no credit rating. The cross-matching of the two databases yielded a total of 113 such companies, which make up what is called the private market group. Those firms in COMPUSTAT that in 1989 had neither a credit rating nor outstanding long-term debt but that did have some short-term debt outstanding were assumed to be constrained to borrow only from banks (or other, bank-like intermediaries such as finance companies); this collection of firms is called the bank group and contains 472 members. Finally, those firms in COMPUSTAT that had neither a credit rating nor any outstanding debt (short or long term, except for trade debt) in 1989 were assumed to be shut out of all three debt markets. This collection of firms is called the equity group and consists of 613 firms.

This method of classifying firms is far from perfect for various reasons. First, and perhaps most important, implicit in the definition of each group is an assumption that a company cannot tap a particular debt market if it has not actually done so. This assumption is clearly not correct in all cases. For example, several firms classified in the bank group probably could have issued in the private or public bond markets on standard terms but simply chose not to do so. Firms that issued private placements before 1989 but not in 1989 are less likely to fall in the bank group because such firms probably still showed long-term debt on their balance sheets in 1989. Second, according to the bank group definition, the presence of short-term debt on the balance sheet indicates the firm's ability to tap the bank loan market. However, COMPUSTAT's definition of short-term debt includes loans from various lenders: loans payable to stockholders, officers of the company, parents, subsidiaries, and brokerage companies as well as loans payable to banks, finance companies, and other intermediaries. Our aim is to include in the bank group all firms that have access to banks or bank-like intermediaries, but several firms without such access were probably misclassified (they should be in the equity group) because they had loans outstanding from stockholders or other non-intermediary sources. Third, many equity group firms may have had bank lines of credit that were simply unused at the end of their 1989 fiscal years.[57] Fourth, the presence of a credit rating in COMPUSTAT implies only that a firm once had access to the public bond market, not that it had access in 1989.

The private market, bank, and equity groups are also undoubtedly biased selections of firms because only those firms that appear on the COMPUSTAT tapes have been selected. COMPUSTAT's bias toward large firms means that the firms in these three groups are likely larger on average than corresponding groups of firms for the economy as a whole. Other characteristics may show some bias as well. However, the bias probably makes observed differences across groups less dramatic. Consequently, any differences found in the analysis are unlikely to be the result of this sampling bias.

Finally, the criteria used to define the four groups focus on the characteristics of the firm, not on the characteristics of the debt issue. As mentioned earlier, some firms that could readily issue straight debt in the public market may be constrained to the private market for more complicated issues such as some leases or project

54. COMPUSTAT provides no information on the types of long-term debt on balance sheets. For information on the IDD database, see appendix G.

55. In COMPUSTAT, the ratings are by Standard and Poor's (S&P). Virtually all investment-grade firms and almost all below-investment-grade firms with public debt outstanding have a rating from S&P. Further, in 1989 S&P rarely provided a debt rating for a firm with some private or bank loan debt but no public debt outstanding.

56. The year 1989 was chosen to avoid distortions caused by the credit crunch in the private placement market in 1990–92, which is described in part 3, section 1. Also, since 1989, S&P has rated an increasing number of private placements, so our method of identifying public market group firms would be less reliable for those years.

57. Many smaller firms reportedly choose a date for the end of their fiscal year that is at a point in their annual cycle at which debt is at a minimum in an attempt to window-dress their year-end balance sheets.

financings. We address this issue later in this section.

Despite these classification problems and biases, we believe our method of classifying firms is on the whole roughly accurate and that the distinctions that are revealed are economically meaningful.

The firm characteristics examined include the size of the firm, measured by total assets, sales, and market value of equity. We also looked at the three-year growth rate of sales, return on assets, (measured by operating income before depreciation divided by total assets), research and development (R&D) expenditures as a percentage of sales, the fixed-asset ratio, the ratio of total debt to assets, and the interest coverage ratio.

Differences in firm size across groups, measured by total assets, total sales, or market value of equity, are pronounced (table 5). Firms in the public market group are much larger than firms in the private market group, which in turn are very much larger than firms in the bank or equity groups. For example, mean assets of companies in the public market group are $6.3 billion, considerably larger than the mean of $3.4 billion for firms in the private market group. The means for the bank and equity groups are even smaller at $40 million. These differences in means are all statistically significant at the 1 percent level. The medians have a similar relationship among the three groups.[58]

Table 5 presents statistics for three other variables that are plausibly correlated with the degree of information problems posed by firms: the ratio of R&D expenditures to sales, the fixed-asset ratio, and a three-year average growth rate for sales. Many economists have used R&D expenditures as a proxy for the potential severity of agency problems between shareholders and debtholders.[59] The risk implicit in research and development cannot be easily monitored by outsiders, including debtholders, as a firm with large R&D expenditures has wide scope for discretionary behavior. For example, such a firm may require intensive monitoring by debtholders to ensure that it is working on a mundane research project with a moderate but fairly sure payoff rather than a longshot with a high payoff. Intensive monitoring may be required to ensure that the firm is not underinvesting in projects with positive net present values (Myers, 1977). R&D-intensive companies, being inherently more information problematic than other firms, may therefore find banks more receptive to providing financing because banks can monitor more intensively than lenders in the public markets. The evidence provided by this variable on the intensity of monitoring in the private placement market generally conforms with our hypothesis about differences in the degree of information problems across the four groups. Mean R&D intensity is higher in the private placement market than in the public market, although the medians are about the same. The significantly higher R&D intensity for the bank and equity groups than that for the private market group indicates that issuers in the former groups tend to require significantly more monitoring by lenders than do issuers of private placements.

A similar hierarchy of information problems is suggested by the fixed-asset ratios. Firms with a large percentage of fixed assets may have fewer information problems than other firms for two reasons. First, they may be able to offer some of their fixed plant and equipment as collateral to potential creditors. Second, monitoring the sale of fixed assets or their transformation from one use to another may be easier than it is for more liquid assets. The more of a firm's assets that are fixed, therefore, the smaller may be the scope for shareholders to engage in wealth-transferring investment projects.

As one moves from the public to the private to the bank and finally to the equity group, the decline in fixed-asset ratios implies that information problems increase. The higher fixed-asset ratio for the bank group compared with that for the equity group suggests that a small firm's ability to provide fixed assets as collateral may be a factor in its ability to obtain bank loans.

Sales growth rates may also be correlated with information problems in that high growth may be a sign of entry into new lines of business or of being in lines of business that are in rapidly developing markets. Both situations offer more scope for agency problems to surface during the life of a debt contract. The evidence from this variable, however, is weaker than that from R&D intensity and the fixed-asset ratio: The mean is significantly smaller for firms in the public group than for those in the private group, a finding consistent with private issuers requiring more monitoring; the median is smaller as well. Values for the private group do not differ significantly from those for the bank and equity groups,

58. Easterwood and Kadapakkam (1991) also find that industrial firms using the private market are smaller than those using the public market.

59. See Prowse (1990) and references therein.

5. Mean characteristics of firms with access to the public, private, bank loan, and equity markets[1]

Variable	Group of firms			
	Public (1)	Private (2)	Bank (3)	Equity only (4)
	Billions of dollars			
Total assets	6.3[2] (1.5)	3.4[2] (.5)	.04 (.05)	.04 (.09)
Total sales	3.2[2] (1.0)	1.0[2] (.4)	.04 (.03)	.04 (.03)
Market value of equity	1.8[2] (.3)	.7[2] (.06)	.10 (.01)	.07 (.02)
	Percent			
Three-year average sales growth	6.2[3] (4.9)	13.9 (8.1)	14.4 (.9)	19.3 (5.0)
	Ratio			
Ratio of R&D expenditures to sales	.03 (.01)	.07[2] (.009)	.38 (.04)	.39 (.05)
Fixed-asset ratio	.49 (.46)	.42[2] (.40)	.31 (.21)	.28 (.19)
Return on assets	.08 (.08)	.06[2] (.07)	−.17 (−.05)	−.04 (−.01)
Ratio of total debt to assets	.40 (.30)	.40[2] (.40)	.74[2] (.15)	0 (0)
Interest coverage ratio	3.50[2] (2.10)	2.70[2] (1.80)	1.30[2] (−.02)	40.40 (15.10)
MEMO: Number of firms in group	1,149	113	472	613

1. Numbers in parentheses are medians. Public firms are those with access to the public, private, and bank debt markets. Private firms are those with access to the private and bank debt markets. Bank firms are those with access to the bank loan market only. Equity firms are those with no access to the bank loan, private placement, or public bond markets.

2. Mean of group is significantly different from mean of group in column to the right at the 1 percent level.

3. Mean of group is significantly different from mean of group in column to the right at the 5 percent level.

however, and the medians display an uneven pattern.

On the whole, the results for the three variables conform with our hypothesis about the differing degree of information problems posed by the four groups of firms. They also accord with the remarks of market participants, who asserted that buyers of private placements, especially the larger life insurance companies, engage in organized and active monitoring, although their monitoring programs are typically not so intensive as those of banks.

Average return on assets and two measures of leverage, total-debt-to-asset ratios and interest-coverage ratios, are indicators of observable credit risk. As noted in part 1, section 1, information problems and observable credit risk are separate concepts, and in principle there is no reason that the pattern of credit risk should be different in information-intensive and non-information-intensive markets. In practice, however, both are related to borrower size.

Caution should be used in interpreting the differences between the bank and equity groups and the other groups in the measures of leverage, as firms in the former groups either had no long-term debt outstanding or no debt at all on their balance sheets (according to COMPUSTAT

and ignoring trade debt). Thus, zeros will appear in either the numerator or the denominator of the ratios for many equity group firms, making the ratios poor measures of the riskiness of these firms and influencing the mean and median values for the groups.

A comparison of ratios for the public and private placement groups indicates that differences in credit risk may not be as great as differences in information problems. Both the mean and median debt-to-asset ratios and the return on assets are similar for the two groups. Median interest-coverage ratios are also similar, but the mean interest-coverage ratio is significantly higher for the public group. The implication is that private placements issuers may be somewhat riskier as a class, but not a great deal riskier, than public bond issuers. Comparing ratios for the private placement and bank groups, the means of the three ratios differ significantly; the medians also differ as predicted except for the debt-to-asset ratio. It appears that members of the bank group pose larger observable credit risks for lenders.[60]

On the whole, these results accord well with the remarks of market participants, who often described private issuers as "solid companies" that have taken a major step in "graduating" from having access only to the bank loan market but that are typically "not quite ready" to issue in the public bond market. Some investors also indicated that their historical experience of loss on private placements and public bonds was virtually identical within credit-rating categories. The statistics presented here and the remarks of participants offer little support for a hypothesis that low observable credit risk is the primary requirement for a borrower to have access to the public market, instead of only the private placement and bank loan markets. The existence of the public junk bond market and the fact that contract terms, especially covenants, and lender due diligence and monitoring activities differ across the public and private markets for borrowers with the same bond ratings also imply that information problems are a more important determinant of market access than observable credit risk.

In sum, if the groups of firms analyzed here are representative of borrowers' access to debt markets, then their characteristics are broadly consistent with our explanation of the factors influencing borrowers' choice of debt market. Corporations able to borrow in the public markets tend to be large and to pose relatively few information problems for lenders; thus they can borrow from a wide variety of lenders. Companies issuing in the private but not the public market are smaller and appear to be more information problematic; however, they apparently do not represent substantially greater observable credit risks. Such companies must be served by information-intensive lenders. The companies confined to the bank loan market or to equity markets are much smaller, are more information problematic, and pose larger pure credit risks. Consequently, they require the greatest degree of due diligence and loan monitoring by lenders, or they are unable to issue debt at all. The information problems associated with smaller and medium-sized firms and their increased need for information-intensive lenders appear to be the major reasons for the size pattern observed among the three groups and for the differential access of firms to credit markets.

Companies Issuing in Both the Public and the Private Markets

As mentioned earlier, some firms that could readily issue straight debt in the public market may be constrained to the private market for more complicated issues, such as leases or project financings. To obtain evidence regarding this hypothesis, we examined differences in private issues between our private market group and a fifth group of firms that issue in the private market even though they have previously tapped the public market for funds. This group, called the public–private group, consists of those firms that are listed in the IDD database as having issued a private placement in 1989 and listed on the COMPUSTAT tape as having a bond rating. It comprises 109 firms, with 175 issues of private debt in 1989.

Several differences exist between the private debt issues of firms in the private market group and those in the public–private group (table 6). The much larger average size of private placement issues by the public–private firms than that of the private market group firms reflects the much larger size of firm in the former group. In addition, the mix of securities issued by the private market firms differs significantly from that of the public–private group in terms of their credit analysis

60. The median debt-to-asset ratio may be lower for the bank group because firms with access only to banks may rely more on trade credit than do public or private placement group firms and trade debt is not included in COMPUSTAT's debt measures.

6. Characteristics of the private placements of firms with and without access to the public debt market, 1989

Characteristics	Group[1]	
	Private	Public–private
Number of issues	140	175
	Percent	
Firms issuing		
Simple debt[2]	96.5	87.6
Complex debt[2]	3.5	12.4
Issuance in form of		
Simple securities	91.9	74.2
Complex securities	8.1	25.8
	Millions of dollars	
Private issue size		
Mean	100.1	184.5
Median	48.5	60.0
Mean size of		
Simple issues[2]	86.7	50.8
Complex issues[2]	236.0	576.5

1. The private group comprises firms that issued a private placement in 1989 and have no access to the public debt market. The public–private group comprises firms that issued a private placement in 1989 and have access to the public debt market. Access to the public debt market is defined by the existence of a public debt rating.

2. Simple debt includes senior securities, secured notes, mortgage-backed notes, debentures, and medium-term notes. Complex debt includes lease-backed bonds, leveraged leases, receivable-backed bonds, and variable and floating-rate notes.

requirements. We define "complex" securities to be equipment trusts, lease-backed bonds, leveraged leases, receivables-backed bonds, and variable and floating rate notes. Complex securities appear in the public market, but in many cases they require investors to engage in sophisticated and intensive credit analysis. We define "simple" debt securities to be senior securities, secured notes, mortgage-backed notes, debentures, and medium-term notes. Simple securities likely require less in the way of due diligence and monitoring. Measured by the number of issuers and by the dollar amount issued, the percentage of total private issuance in the form of complex securities was much higher in 1989 for public–private group firms than for private market group firms. Conversely, a much higher percentage of total private issuance by private market firms in 1989 was in the form of simple debt.[61] This evidence supports the hypothesis that firms with access to the public market may choose to issue more complex securities in the private market, where the capacity of investors for credit analysis is greater.

The average size of simple and complex issues for the two groups of firms is consistent with the proposition that issuance cost is of secondary importance in determining market choice by borrowers (last two rows of table 6). The average issue size for complex private placements was $576.5 million, suggesting that on the basis of issuance costs alone the public market would have been the appropriate choice. That they were issued in the private market indicates that due diligence and loan monitoring requirements were such that only information-intensive lenders would buy the issues.

Simple securities issued by the public–private group could be issued in either the public or the private market because they require relatively low levels of due diligence and monitoring by lenders. In this case, issuance costs are likely to be a dominant consideration. The average issue size of $50.8 million for the simple securities issued by the public–private group in the private market is consistent with this notion, because the private market reportedly offers lower total costs for issues of that size.

Summary

The marked differences between firm characteristics and loan characteristics for the various groups support the hypothesis that firms have differential access to the three markets according to the information problems they pose for lenders. At one end of the scale are small, relatively unknown firms posing significant information problems that require extensive due diligence or loan monitoring by lenders. These firms tend to have access only to relatively short-term loans provided by banks and other bank-like intermediaries, which have the staff and expertise to undertake information-intensive lending and which limit borrowers' risk-taking through tight covenants or collateral in loan agreements.

Somewhat less information-problematic, typically larger borrowers can issue in the private

61. This pattern appears robust to plausible variations in the definitions of simple and complex securities. In particular, the pattern persists if all secured bonds (including mortgage bonds) are defined as complex.

placement market. These borrowers must still be served by an information-intensive lender, but they pose fewer problems than the average bank borrower. They can issue longer-term debt with somewhat looser covenants than those in bank loans.

Finally, well-known, typically larger firms that are not information problematic and that have straightforward financings can issue in the public debt markets, where lenders perform little due diligence and loan monitoring and where covenants are relatively few in number and loose in nature.

The reasons for this equilibrium pattern of borrower characteristics are discussed in part 1, section 5. The pattern is evidence that the various debt markets are imperfect substitutes for one another, which implies that breakdowns or failures in one market may have material effects on firms that rely on that market for a major part of their financing needs, even if other markets are functioning normally. An example of such a breakdown is discussed in part 3, section 1.

4. Lenders in the Private Placement Market

Although various institutions hold some traditional private placements in their portfolios, life insurance companies purchase the great majority of them. For example, for a sample of 351 placements issued during 1990–92, life insurance companies purchased 83 percent of dollar volume, whereas the next largest type of investor, foreign banks, purchased only 3.6 percent (table 7).[62]

7. Lender shares of the market for traditional private placements, 1990–92

Percent

Type of lender	Share of volume
Life insurance companies	82.6
Pension, endowment, and trust funds	1.7
Finance companies	1.4
Mutual funds	.7
Casualty insurance companies	1.4
U.S. commercial banks	3.3
Foreign banks	3.6
U.S. savings and loans and mutual savings banks	.7
U.S. investment banks	.9
Unknown	3.7

SOURCE. Calculations based on data from Loan Pricing Corporation.

Lending in the private placement market is also concentrated in the hands of a relatively few lenders. Although the sample lists 315 separate investors, most participated in only one deal or in a few deals and bought only small amounts. The top twenty investors were life insurance companies and accounted for 56 percent of dollar volume.

The concentration of private placement lending in the hands of a relatively few lenders and a few types of lender has probably occurred for four reasons. First, the large proportion of information-problematic borrowers in the traditional private market necessitates that major buyers of private placements be intermediaries. Intermediaries can capture economies of scale in due diligence and monitoring and can also build and maintain over long periods the reputations for fair dealing that are important when debt contracts must include covenants.

Second, financial intermediaries tend to specialize in a few liability-side lines of business (for example, banks mainly take deposits) at least partly because of regulatory restrictions. Given such specialization, the natural tendency of lenders to seek superior risk-adjusted returns will lead to specialization on the asset side. Different debt instruments are associated with different patterns of risks, and different lenders have different abilities to implement a cost-effective and appropriate set of risk control measures in order to earn superior risk-adjusted returns on any given type of asset. For example, banks' short-term deposit liabilities lead them to make short-term loans, whereas insurance companies' longer-term liabilities lead them to purchase longer-term assets.

62. The sample was drawn from Loan Pricing Corporation's *Dealscan* database. An effort was made to include only traditional private placements, but some Rule 144A issues may have been included.

The shares shown in the table should be viewed as rough approximations for several reasons. First, the sample may not represent the population of private placements issued during the period. Second, the sample includes some issues that appear to be bank loans, not traditional private placements, in effect. Removal of these would reduce the shares of U.S. and foreign banks and of U.S. savings and loans and mutual savings banks. Finally, the sample period is unusual in that it involves a severe credit crunch in the below-investment-grade segment of the market (described in part 3, section 1). Because purchases of private placements by finance companies have traditionally been below-investment-grade securities, the low share of finance companies may not be representative of other periods nor of their current share of all outstanding placements. Thus, the types of lender are listed in table 7 in the order of importance as indicated by anecdotal evidence, not in the order of their share of the sample.

The risks most commonly associated with traditional private placements of debt are credit risk, asset concentration risk, interest rate risk, and liquidity risk. Extensive credit evaluation and monitoring are required to control credit risk in private placements, whereas appropriate diversification can control asset concentration risk. Interest rate risk may be controlled by matching private placements with liabilities of similar duration, or other hedges. With regard to liquidity risk, if a lender holds private placements, its liabilities must not be redeemable on demand, or other parts of its portfolio must be sufficiently liquid to meet any likely withdrawals. The relative efficiency with which different classes of financial intermediary can undertake to control these risks, as well as legal and regulatory constraints, determines the institutional pattern of investments in private placements. Although many financial intermediaries can effectively control the credit and asset concentration risks associated with private placements, life insurance companies are especially well positioned to control the liquidity and interest rate risks.[63]

A third reason for the concentration of private placement lending is the concentrated structure of the insurance and related markets. At the end of 1991, the twenty largest life insurance companies held 51 percent of industry assets. Because these companies have a large volume of funds to invest, their domination of the private placement market is natural. A final reason for concentration is that large lenders have an advantage in obtaining private placements because their large volume of investments permits them to participate in the market continuously, giving them up-to-date information about the state of the market (see part 2, section 2).

Apart from the statistics shown in table 7 and some data for the life insurance industry that are discussed in parts 2 and 3, little detailed information on investors in private placements is publicly available. Consequently, much of our discussion is based on interviews with market participants. To summarize this information, life insurers buy a broad spectrum of private placements, but many of them focus on senior, unsecured debt. Finance companies are also said to be significant buyers of private debt, but they tend to specialize in high-risk investments and, consequently, require that borrowers provide collateral and equity kickers, such as warrants or convertible bonds. They have developed special expertise in due diligence and monitoring involving collateral and equity features. Though commercial banks have the capabilities for credit analysis, they are not significant buyers of private placements, probably because their short-term, liquid, floating-rate liabilities are not well matched by private bonds. Regulatory and other restraints prevent or discourage major investors in public bonds, such as most pension funds and mutual funds, from investing heavily in private bonds.

Life Insurance Companies

Market participants estimate that life insurers purchase between 50 percent and 80 percent of new issue volume each year (table 7 supports estimates at the high end of that range). At year-end 1991, life insurers held $212 billion of private placements in their general accounts, representing 26 percent of their total bond holdings and 16 percent of their general account assets.[64]

The twenty largest insurance companies, as measured by total assets, accounted for 68 percent of industry holdings of private placements at the end of 1992. Furthermore, for this group, private placements were 39 percent of total bond holdings and 22 percent of general account assets. The next eighty largest insurers account for most of the remaining industry holdings of private placements, and within this group, several companies have sizable portfolios.

Some idea of how the life insurance industry allocates its funds among different classes of private bonds can be obtained from the *ACLI Investment Bulletin*, which provides data on the composition of new commitments of funds to private placements by major insurance companies. Life insurance companies strongly prefer fixed-rate private placements: In 1992, more than 97 percent of their commitments were fixed rate. Securitized instruments, mainly mortgage-backed securities, were 13 percent of commitments although, as discussed in part 1, section 2, a much larger fraction probably carried collateral. Insurers invest primarily in medium- to long-term maturities; less than 10 percent of their 1992 commitments had an

63. Though a lender with floating-rate liabilities might control interest rate risk with swaps or other hedges, one with short-term liabilities might find the risks associated with major investments in long-term, illiquid assets difficult to manage.

64. Information on private placements held in separate accounts is not available.

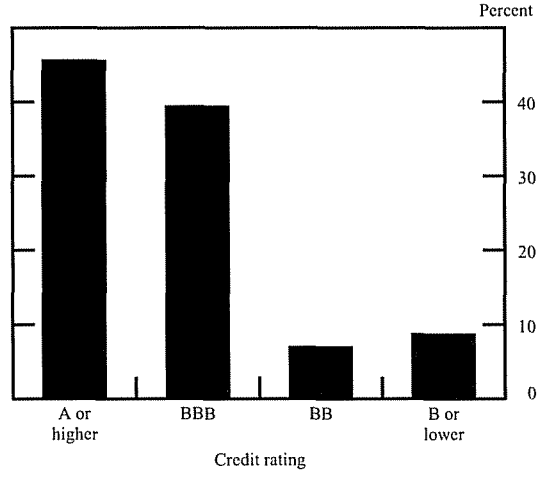
average life of three years or less, with more than half having average lives between five and ten years.

This concentration on medium- to long-term, fixed-rate debt is sensible because such securities can easily be matched with the life insurance industry's long-term, fixed-rate liabilities. Many private placements also have sinking fund provisions that further enable insurers to match the cash flow of their investments with that of their liabilities. The strong call protection that is typical of private placements also facilitates matching.[65] Life insurance companies buy private placements from firms in all sectors of the economy. Most tend to diversify across a broad range of industries, although many have favorite industries in which they have a particular expertise. In 1992, 78 percent of their total commitments went to the nonfinancial sector, with just over 30 percent going to manufacturing, 8 percent to the oil, gas, and mining industries, and another 20 percent to the utilities, communication, and transportation sectors. Life insurance companies have sharply increased their purchases of securities issued by foreign companies, or U.S. subsidiaries of foreign companies, to over 7 percent in 1992 from less than 3 percent of total commitments in 1990.

The large insurers' investment in risk-control technology is extensive.[66] Most of these insurers have large staffs of credit analysts, who evaluate the credit quality of potential issuers and monitor the health of firms to which credit has been extended. Most conduct a quarterly review of each private bond held in their portfolios, with a more formal annual or semiannual review. Violations of covenants or requests for waivers of covenants generate further reviews. The costs of risk-control operations are covered by the higher risk-adjusted yield of private placements relative to public bonds, which require little or no active monitoring by security holders.[67] The private market provides borrowers willing to compensate the lender for these risk-control services.

The large investment in credit evaluation and monitoring leads most large insurance companies

15. Distribution of credit ratings of private placements held in the general accounts of life insurance companies, December 31, 1992



SOURCE: National Association of Insurance Commissioners.

to concentrate on more complex credits; however, strategies vary even among these companies. Besides dominating the straight debt sector of the market, life insurers buy other types of private securities, such as convertible debt or asset-backed bonds, though their share of these sectors is somewhat lower. In terms of credit quality, insurers focus primarily on securities rated A and BBB (chart 15). At the end of 1992, around 17 percent of total private bonds held by the twenty largest companies were rated below investment grade; however, substantial variation exists, with some companies having up to 38 percent of their private portfolio in below-investment-grade bonds and others having almost none at all.[68] Securities in this credit range, particularly those rated just below investment grade (which insurers often refer to as Baa4 securities), are favored by those insurance companies attempting to gain maximum advantage from their credit analysis and monitoring skills. These insurance companies like to take advantage of the large difference in yields between investment-grade and below-investment-grade credits by lending to strong BB-rated companies. However, others are more conservative and focus solely on issues rated A or higher.[69]

65. See part 1, section 2, for statistics on call protection in private placements.

66. See Travelers (1992) for a description of the credit-monitoring practices at insurance companies.

67. The premium on private bonds as compared with that on public bonds is often characterized as reflecting the fact that private bonds are typically less liquid than public bonds. We believe that the premium is due more to a requirement to compensate investors in private bonds for their intermediation services than to any differences in liquidity.

68. There are regulatory restrictions on the amount of below-investment-grade bonds a life insurer can hold.

69. Over the past two years, in response to regulatory pressures and concerns about their financial condition, insurers have withdrawn substantially from the below-investment-grade sector of the private market. See part 3, section 1.

According to market participants, smaller insurers typically have much less extensive risk-control technology at their disposal. They therefore tend to concentrate on higher-quality, less-complex credits. They also may participate in deals that larger insurance companies have already committed to, using the presence of these larger insurers as a signal that the deal is a favorable one.

Most insurance companies rely heavily on agents for prospective transactions, although some direct lending occurs between an insurer and its existing borrowers. Only the very largest insurance companies originate new transactions on a regular basis, and only one insurer syndicates private bonds. The largest insurers generally prefer to be the sole source of funds for an issuer. However, many issues are larger than the maximum amount that individual insurers permit to be lent to one borrower; a typical issue may have up to a half dozen insurance companies funding it. Insurers typically fund between 5 and 20 percent of the deals that are marketed to them.

Most large insurers invest in both public and private bonds, and they have allocation mechanisms to alter the flow of money into these markets as spreads change in the two markets. Until recently, the groups within large insurance companies responsible for purchasing private and public bonds were usually separated; however, some companies have recently combined the groups. Market participants report that many medium-sized insurers have for some time used a single group to make all investments in bonds.

Finance Companies

Finance companies have traditionally participated in the lower-rated or mezzanine sector of the private bond market, specializing in collateralized debt or debt with equity kickers. Rates in this sector of the market may be fixed or floating. Finance companies' choice of this market sector follows naturally from their historical concentration in secured or asset-based lending. Returns on private placements required by finance companies are generally well in excess of the yields on the less risky, straight bonds purchased by insurance companies.

According to market participants, the participation of finance companies in the private market is much more concentrated than that of insurance companies. Among the twenty largest finance companies, only a half dozen or so provide a significant volume of funds, although some others are attempting to expand their presence in the market. Outside the top twenty, few finance companies participate at all.

Pension Funds

Pension funds, which are significant investors in publicly issued corporate bonds, have not been big buyers of private placements, except for a few state pension funds. Market participants suggest several reasons.[70] First, many pension funds have charters preventing them from investing in below-investment-grade or illiquid assets. Although in practice some higher-rated private bonds may be more liquid than some public bonds, market participants generally consider private placements to be illiquid. Second, few state or corporate pension funds are currently staffed with the credit analysts and other personnel that would allow them to become direct investors in private placements. Instead, staffing is directed toward public market investments, which require much less credit analysis. A decision to hire the necessary staff and install the expensive internal monitoring systems to support direct investment in private placements would require a long-term commitment to the private market by the pension manager. Few pension fund managers thus far have been willing to so commit. Even if they should wish to do so, state pension funds face problems in hiring the necessary personnel. Staff size and salaries are generally controlled by the state legislatures, and increasing the size of credit analysis staffs is thus cumbersome and time-consuming.

As an alternative to direct investment, some pension funds have turned to money managers, often insurance companies. Indirect investments, however, are on a fairly small scale, no doubt partly because pension fund managers are reluctant to invest even indirectly in a market with which they are unfamiliar. The private market operates largely in conformance with unwritten, informal rules enforced by the desire of the major agents

70. Pension funds appear to be the main suppliers of funds in the private equity market, which they finance indirectly through investments in limited partnership investment funds (see appendix B). Their preference for private equity over private debt appears mainly to stem from a desire to earn the much higher returns that are potentially available in the private equity market.

and buyers involved to maintain their reputations. To investors that are outsiders, the way the market operates may thus be hard to understand, which may inhibit them from risking their money there. Also, insurance companies themselves, who would be the primary source of the managerial resources necessary for any large-scale activity in this area, have been reluctant to set up separate account private placement funds financed with institutional money.[71] They apparently see little investor interest in such funds or do not wish to interrupt the flow of private placements to the company itself.[72] Furthermore, market participants report that investor experience with at least one separate account fund has not been good because the managing insurance company, lacking a stake in the separate account investments, did not perform adequate monitoring.

Banks

Banks, which are information-intensive lenders, might also be expected to have interest in the types of securities offered in the private market. However, for several reasons they seldom buy private placements. First, banks' liabilities are not long term and are not as well matched with private bonds on the asset side as they are with short-term, floating-rate loans. Of course, the swap market can be used to turn fixed-rate assets into floating-rate, but longer-term swaps are expensive. Second, the looser covenants on private placements relative to bank loans may make some banks uncomfortable.

Bank purchases of private placements are subject to some regulatory restrictions, which are described in appendix C. Bank holding companies may purchase privately placed debt securities without restriction. Banks themselves may also purchase them but must place them in a loan account and follow traditional underwriting procedures. The latter requirement means that banks must evaluate and document the creditworthiness of the borrower as they would with any bank loan. As credit analysis is the norm in the private placement market, such evaluation and documentation do not appear to be onerous requirements. Some issuers attempt to create interest among banks and life insurance companies by constructing offerings that include both private bonds and loans, which are identical in their terms except for the classification of the instrument.

Other Investors

Other investors in private bonds include mutual funds, foreign banks, endowment funds, and some very wealthy individuals, but the combined market share of these participants is quite small. Mutual funds are restricted to holding no more than 15 percent of their assets in the form of illiquid securities. An exception exists for private placements purchased pursuant to Rule 144A. For such securities, the mutual funds' boards of directors may classify the securities as liquid if they determine that the securities are generally as liquid as comparable publicly traded bonds.[73] Mutual funds have recently increased their investments in private placements, especially underwritten Rule 144A securities, so current restrictions may in the future be constraints. In the mid-1980s, Japanese banks aggressively bought private bonds, but since then they have disappeared from the market.

Summary

A capacity for due diligence and loan monitoring is a prerequisite for a significant volume of direct investment in private placements by a lender. Life insurance companies, finance companies, banks, and a few other financial institutions have this capability. However, life insurers dominate the private debt market, partly because they have large pools of funds suitable for investment in longer-term, fixed-rate, illiquid securities. Insurance

71. Insurance company separate accounts operate much like mutual funds, in that buyers of liabilities associated with separate accounts bear the risk of investments, whereas liabilities associated with the general account of an insurer generally offer fixed payoffs backed by the insurer's capital.

72. Insurance companies have recently had a strong appetite for investment-grade private placements. Because of their withdrawal from the below-investment-grade sector of the market, however, they appear to have excess capacity to analyze and monitor lower-quality credits (see part 3, section 1).

73. Rule 144A securities are described in detail in part 2, section 1. After life insurance companies, mutual funds have been the largest buyers of 144A private bonds. According to the SEC staff report on Rule 144A (September 1991), insurance companies bought just over two-thirds of the private bonds issued under Rule 144A in the eighteen months following the rule's adoption, mutual funds bought 15 percent, pension funds bought 5 percent, and banks and thrifts bought 4 percent. More recently the share held by mutual funds has increased.

companies also have a long history of lending directly to middle-market firms that has allowed them to develop expertise and cost-effective risk-control technologies. This expertise may constitute a barrier to entry for other financial institutions, including most pension funds, which might otherwise seem to be suited to lending in this market. Regulatory and other obstacles also discourage pension funds and mutual funds from participating heavily in the market. Banks have the necessary expertise in credit monitoring but for several reasons have not found private placements to be suitable investments. As in other credit markets, finance companies have carved out a niche in the private market for higher-risk borrowers. This segment constitutes a small part of the overall market, but it is one in which the insurance companies have little interest.

Some market participants feel that, over the long term, pension funds will overcome the obstacles that have precluded their large-scale participation to date and will be much more important providers of funds in this market, much as they have replaced life insurance companies as the major source of finance in the private equity market. The immense growth of their assets projected for the future may force pension plans to consider investments in markets new to them. However, the information-intensive nature of the traditional private market is unlikely to change; so if pension funds are to be a larger source of finance, they will likely become so through indirect investments in funds managed by insurance companies. The alternative is for pension funds themselves to acquire the capacity for conducting due diligence and monitoring.

5. Private Placements, the Theory of Financial Intermediation, and the Structure of Capital Markets

As previously discussed, contract terms and borrower and lender characteristics differ systematically across major debt markets (see table 8). Privately and publicly issued bonds tend to have long terms and fixed rates, whereas bank loans tend to have short terms and floating rates. Public issues and issuers are the largest on average, and bank loans and bank borrowers are the smallest. On average, public issues are the least risky, private placements are riskier, and bank loans are riskier still. Public issuers tend to be well known; private placement issuers tend to be less well known; and bank borrowers tend to be companies for which relatively little information is available publicly.[74] Public issues rarely include collateral and have few restrictive covenants. In traditional private placements, collateral is not uncommon, and covenants often impose significant restrictions on borrowers. Bank loans, in contrast, tend both to be secured and to have tight covenants. The terms of public issues are rarely renegotiated, whereas those of most private placements are renegotiated at least once, and those of bank loans are frequently renegotiated. Public issues are typically liquid, whereas most private placements and bank loans are illiquid. Investors in public securities carry out relatively little due diligence and monitoring of borrowers. Investors in bank loans and private placements perform significant amounts of due diligence and loan monitoring. Most private placement lending is done by a single type of financial intermediary, life insurance companies.

This section offers an integrated explanation for these patterns, elements of which have been mentioned in previous sections. The explanation is centered on hypotheses that borrowers pose a spectrum of information problems for lenders and that lenders address such problems through due diligence at loan origination and loan monitoring thereafter. Firms that are not information problematic can borrow in any market but generally find costs to be lowest in the public bond (and commercial paper) markets. Information-problematic firms find it optimal to negotiate debt contracts that include certain kinds of covenants and collateral and to deal with lenders having a capacity for due diligence and loan monitoring. Such lenders also can flexibly renegotiate the contracts, which is efficient since covenants are frequently violated.

Such contracts are not well suited to the public markets that exist today; instead they are issued in the bank loan and private placement markets.[75] Lenders in these markets are almost always financial intermediaries, and they tend to focus their investments in assets that match the rate and maturity structure of their liabilities. Correlations among several factors—the degree of information

74. This statement refers to the average information-problematic borrower. As noted earlier, banks provide large, well-known companies with lines of credit to finance working capital or to back commercial paper.

75. Of four major markets, two are for nonproblematic borrowers (public bond and commercial paper), and two are for problematic borrowers (bank loan and private placement). One of each pair of markets is for short-term, floating-rate debt; the other of each pair is for long-term, fixed-rate debt.

8. Credit market characteristics

Characteristic	Market		
	Bank loan	*Private placement*	Public bond
Maturity	Short	Long	Long
Rate	Floating	Fixed	Fixed
Severity of information problems posed by the average borrower	High	Moderate	Small
Average loan size	Small	Medium to large	Large
Average borrower size	Small	Medium to large	Large
Average observable risk level	High	Moderate	Lowest
Covenants	Many, tight	Fewer, looser	Fewest
Collateral	Frequent	Less frequent	Rare
Renegotiation	Frequent	Less frequent	Infrequent
Lender monitoring	Intense	Significant	Minimal
Liquidity of loan	Low	Low	High
Lenders	Intermediaries	Intermediaries	Various
Principal lender	Banks	Life insurance cos.	Various
Lender reputation	Somewhat important	Most important	Unimportant

problems posed by borrowers, the borrowers' size, their risk, and the size of the loan—account for borrowers being smaller and riskier on average and loans smaller on average in such information-intensive markets than those in the public markets.

The differences between the average borrower from banks and the average issuer of private placements arise mainly because monitoring and risk control mechanisms involving covenants and collateral are less reliable the longer the average life of a loan is. Such mechanisms are most important in loans to very information-problematic borrowers; these borrowers can obtain long-term loans only at high rates, if at all. Thus, they tend to borrow in the shorter-term market, causing the average severity of information problems posed by borrowers to be highest there.

This explanation accounts for more of the features of the U.S. financial system than do traditional explanations that focus mainly on regulation and considerations of asset–liability matching as causal factors. It raises many new questions, however. Why must lenders to information-problematic borrowers be intermediaries? How do due diligence and loan monitoring mitigate risks associated with information problems? What is the role of covenants and collateral? Why are these risk-control mechanisms less effective for long-term loans? Why would a borrower agree to a contract with tighter rather than looser covenants? Why are covenants frequently violated and renegotiated, and why is a lender's reputation for flexibility in renegotiation important? Why is information-intensive debt illiquid? Why is the public market ill-suited to information-intensive lending (what is to prevent public market lenders from acquiring capacity in due diligence and loan monitoring)? What complex of characteristics is required to make a lender competitive in an information-intensive debt market?

Most of these questions have been addressed at least to some extent by existing financial theory. In the rest of this section, we review and extend relevant areas of financial theory to answer these questions and to provide a sense of the foundations of this study. We find existing individual theories of covenants and financial intermediation to be inadequate as a basis for a theory of financial structure. We propose a merging and an extension of the two bodies of theory in the form of a "covenant–monitoring–renegotiation" (CMR)

paradigm in order to answer to the questions posed earlier. We evaluate the consistency of the paradigm with some recent research in empirical finance and graphically relate borrowers and capital markets on an information continuum.

Asymmetric Information, Contracting, and the Theory of Covenants

Two imperfections of capital markets are at the heart of many of the contracting problems that shape debt markets.[76] First, the interests of bondholders and stockholders of borrowing firms are not always aligned; second, parties to financial contracts are not likely to be equally informed about the characteristics of the issuing firm.[77] The informational advantage borrowers have over lenders leads to two kinds of bondholder–stockholder conflict. First, once a debt contract is signed, borrowers have incentives to expropriate wealth from lenders (moral hazard). Second, before a contract is signed, potential borrowers have incentives to understate the risks they will pose for lenders, including moral hazard risks. A simple example of moral hazard risk is provided by Black (1976), who noted that "there is no easier way for a company to escape the burden of a debt than to pay out all of its assets in the form of a dividend, and leave the creditors holding an empty shell" (p. 7). In the absence of sufficiently powerful constraints or capacity for lender monitoring and enforcement capacity, such actions may be either unobservable by the firm's bondholders or beyond their control. Smith and Warner (1979) identify four major kinds of moral hazard that lenders must control:

Dividend payment. If a firm issues bonds and the bonds are priced assuming the firm will maintain its dividend policy, the value of the bonds is reduced by raising the dividend rate and financing the increase by reducing investment. At the limit, if the firm sells all its assets and pays a liquidating dividend to the stockholders, the bondholders are left with worthless claims.

Claim dilution. If the firm sells bonds, and the bonds are priced assuming that no additional debt will be issued, the value of the bondholders' claims is reduced by issuing additional debt of the same or higher priority.

Asset substitution. If a firm sells bonds for the stated purpose of engaging in low variance projects and the bonds are valued at prices commensurate with that low risk, the value of the stockholders' equity rises and the value of the bondholders' claim is reduced by substituting projects which increase the firm's variance rate.

Underinvestment. Myers (1977) suggests that a substantial portion of the value of the firm is composed of intangible assets in the form of future investment opportunities. A firm with outstanding bonds can have incentives to reject projects which have a positive net present value if the benefit from accepting the project accrues to the bondholders.[78]

Covenants may alter the relationship between bondholders and stockholders in two fundamental ways. First, covenants affect the relationship when the borrowing firm is in financial distress by providing lenders with a mechanism for early intervention. This intervention may take one of several forms: forced bankruptcy, a renegotiated restructuring, or the imposition of additional constraints on firm behavior. This can be viewed as the role of covenants *ex post*, which is to

76. Modigliani and Miller (1958) argued that if capital markets are perfect and there are no taxes, a firm's capital structure is irrelevant—that is, the value of a firm is independent of the way it is financed. They argued that the structure of the right-hand side of the balance sheet will determine the way the firm's cash flow will be allocated, but it will not affect the *amount* of the cash flow. By extension, the structure of the firm's financial contracts (that is, the right-hand side claims) is also irrelevant. For example, pledging the firm's equipment to one lender as collateral will alter the allocation among creditors in liquidation but will not alter the amount allocated.

77. In keeping with the literature on contracting, we refer to a borrowing firm's bank, its private creditors, and its public creditors collectively as its bondholders.

78. Smith and Warner (1979), pp. 118–19. Black and Scholes (1973) and Merton (1974) have shown that option pricing theory can be used to value debt and equity. In effect, issuing a bond is equivalent to the owners' selling the firm's assets to the bondholders in exchange for a package consisting of the proceeds from the bond issue, a claim on the firm's dividends, and a European call option on the firm's assets with an exercise price equal to the face value of the bonds and an exercise date equal to the bond's maturity. Because stockholders' equity is essentially a call option, the stockholders' interest is to increase the riskiness of the firm's assets—just as the owner of a call option benefits from an increase in the risk of the stock on which the option is written. *Ceteris paribus*, the gain in stockholders' equity (that is, the European call option) will be offset by the loss in the value of the bonds.

permit these interventions after the consequences of the firm's actions have been revealed.

Second, and possibly more important, is the role of covenants *ex ante*. Debt contracts that include covenants can effectively constrain the ability of stockholders to engage in strategies designed to expropriate wealth from bondholders or otherwise to engage in actions that are detrimental to bondholders. Smith and Warner document that covenants of the kind observed in private placements and bank loan contracts can mitigate bondholder–stockholder conflicts. They also demonstrate that contracting is not a zero-sum game. Terms of contracts affect not only the distribution of wealth between the bondholders and the stockholders but also the total value of the firm. Covenants can increase a firm's value (relative to value under a contract without covenants) by providing disincentives to, or restrictions on, exploitive stockholder behavior. For example, asset substitution incentives may be so powerful that under a contract without constraints stockholders are willing to substitute an asset with a lower expected return so long as it has a sufficiently higher risk than the existing asset. Such a substitution increases stockholder wealth even though it decreases the firm's total value because the bondholders lose more than the stockholders gain. Rational bondholders, however, anticipate that some of their claim will be expropriated through asset substitution and price their bonds accordingly (that is, they demand a higher rate). Thus, in the absence of constraints on asset substitution, equilibriums involving debt financings have two features: First, firms will take more risks than in the presence of constraints (the incentive to substitute assets does not disappear just because the bondholders' anticipation of asset substitution is reflected in the interest rate).[79] Second, a firm's stockholders will absorb the loss in the firm's value that results from the asset substitution. Consequently, any covenant that restricts asset substitution (for example, a requirement to stay in the same business, a restriction on asset sales, or restrictions on investments, mergers, and acquisitions) can increase firm value. Because ultimately the stockholders gain from such restrictions in equilibrium, they will agree to covenants in debt contracts.

The theory of covenants and renegotiation emphasizes that covenants must be based on *mutually observable and verifiable* characteristics, actions, or events (see, for example, Berlin and Mester, 1992, and Huberman and Kahn, 1988). Covenants cannot, for example, be written on characteristics, actions, or events that are observable only by the stockholders and not by the bondholders. Covenants also need to be observable and verifiable by third parties, such as a court of law.[80] Characteristics, actions, or events that are observable but not verifiable cannot be included in covenants; however, they may still significantly affect an optimal debt contract. For example, a bank can refuse to renew a one-year loan on the basis of a mutually observable but nonverifiable characteristic but would have difficulty legally declaring a two-year loan in default at the end of the first year because of a violation of a covenant written on that same characteristic. This example suggests that, in many cases, a short-term loan without a covenant may dominate a longer-term loan with a covenant (see Berlin, 1991, and Hart and Moore, 1989).

Although covenants can be written only on observable and verifiable characteristics, they may be *related* to nonverifiable and even unobservable characteristics. This relation greatly increases the power of covenants for mitigating bondholder–stockholder conflicts. A relation between observables and unobservables may exist for two reasons. First, observable, verifiable actions or events may be correlated with nonverifiable or unobservable actions or events. For example, the true risk of a firm, that is, the volatility of its returns, may not be observable. However, its current ratio may be correlated with this volatility and, therefore, serve as a proxy for risk. Second, an observable characteristic, action, or event may be related to an unobservable characteristic, action, or event through either self-selection or incentive effects. For example, a firm's ability to take unobservable risks may be much greater in industry A than in industry B. Consequently, a covenant that restricts a firm to industry B limits

79. Even when bondholders price in anticipation of asset substitution, stockholders are still better off substituting assets (that is, switching to the riskier strategy) than they would be sticking with the safe strategy. If stockholders stuck with the safe strategy, the bondholders, having priced their bonds on the basis of a risky strategy, would enjoy a windfall.

80. It is not difficult to imagine a wide variety of observable, but not verifiable, characteristics, actions, or events. For example, qualitative attributes of owner–managers would generally be mutually observable but not verifiable. Some characteristics of firms may be too complex to include in covenants.

the ability of a firm to alter its (unobservable) risk profile. A financial covenant may have the same effect. For example, a minimum current ratio requirement may constrain a borrower from selling on account to slow-paying customers.[81] Selling to such customers necessarily increases the *observed* liquidity risk of the firm because its current ratio deteriorates. It may also create an incentive to increase the firm's *unobservable* risk, to the extent that the firm has more ability to sell to unobservably (to the lender) riskier customers if it is permitted to extend trade credit on longer terms.[82]

Collateral can also be used to mitigate bondholder–stockholder conflict. For example, a lien on firm assets (inside collateral) prevents borrowers from selling those assets without lender approval.[83] This limits the firm's ability to expropriate lender wealth through asset substitution (see Smith and Warner, 1979). Owners' pledging personal assets as collateral for a corporate loan (outside collateral) effectively increases their equity exposure. Such increased exposure may have important incentive effects depending on the owner's level of risk aversion. Outside collateral may also be useful in solving adverse selection problems because a borrowing firm's willingness to pledge collateral may reveal its true quality (see Chan and Kanatas, 1985), or it may be useful in solving incentive problems because it may alter the marginal return to risk shifting (that is, asset substitution) (see Boot, Thakor and Udell, 1991).

Information-based Theories of Financial Intermediation

Some theories of financial intermediation focus on the information problems associated with financial contracting. Such theories emphasize that financial intermediaries enjoy economies of scale in producing information about borrower quality because of fixed costs of producing information about any given borrower. Fixed costs make having only one or a few lenders for each borrower economical. Many small individual investors can delegate information-production responsibility to a single large financial intermediary that alone bears the fixed costs.[84]

Commercial banks and life insurance companies are financial intermediaries in the spirit of these models. Both types of institution collect funds from many relatively small investors. These investors (depositors or policyholders) delegate due diligence and monitoring responsibility to the intermediary.

The Covenant–Monitoring–Renegotiation Paradigm

The literature on covenants and that on financial intermediation offer considerable insight into the ways in which markets address issues of bondholder–stockholder conflict. Separately, however, they fall short of describing the real-world financial landscape. The literature on covenants has not adequately addressed the association of covenant constraints with information production—due diligence at the origination stage and monitoring after loan funding. In

81. If a company sells on account to slow-paying customers, its turnover of accounts receivable will slow down (that is, the days turn, or the average days an invoice is outstanding, will increase) as its accounts receivable increase. Assuming no increase in the firm's capitalization (that is, its stockholders' equity plus long-term debt), this increase in accounts receivable will have to be financed by an increase in current liabilities. Because the current ratio is defined as current assets/current liabilities, the current ratio necessarily decreases.

82. A firm's accounts receivable generate risk because the firm is extending credit to its customers. It is generally assumed that slower-paying customers are riskier on average than faster-paying customers (ignoring for purposes of this discussion the ability of the firm to affect the payment patterns of any individual customer through discounts and collection activity). The firm chooses whether to sell to safe or to risky customers based on the risk–return trade-off. This decision will be reflected in the firm's turnover of accounts receivable and its current ratio, which can be observed by the bank. However, it can also affect the firm's *unobservable* risk. Let us assume, for example, (1) that all customers who pay their trade debts in less than thirty days (fast payers) are low risk, (2) that half of all potential customers who pay in more than thirty days (slow payers) are low risk and the other half of the slow payers are high risk, and (3) that the risk quality of the slow payers is perfectly observable by the firm extending the trade credit, but only the accounts receivable turnover and the current ratio are observable by the bank. Under these assumptions, a constraint on the firm's trade policies through a minimum current ratio would effectively limit the ability of the firm to change its unobservable risk profile because it would truncate the firm's decision set.

83. See Berger and Udell (1990) for a discussion of the distinction between inside and outside collateral. Essentially, inside collateral involves pledging firm assets to a particular lender, creating a creditor preference. Aside from lender control effects, this type of collateral alters the payoff *allocation* among creditors in liquidation but does not affect the aggregate *amount* of the payoff. Outside collateral involves pledging nonfirm assets (typically by the firm's owners) to specific lenders. This type increases the assets available to satisfy creditor claims in liquidation (that is, it increases the *amount* of the payoff in liquidation).

84. See, for example, Boyd and Prescott (1986), Diamond (1984), and Ramakrishnan and Thakor (1984).

addition, although covenant constraints can be value-enhancing to the extent that they minimize costs associated with borrower–stockholder conflict, they may also be value-reducing in that they may prevent the borrowing firm from investing in positive-value projects. A complete theory must account for the fact that borrowers choosing contracts with restrictive covenants also tend to be served by lenders that provide flexible renegotiation of the contracts. Borrowers agreeing to contracts with covenants want the option to pay off their loan or the ability to renegotiate the contract if they are constrained from investing in value-enhancing projects. Like loan origination, loan renegotiation requires that lenders produce information.

The existing information-based theories of financial intermediation fall short because they generally do not capture nor analyze the dynamic nature of intermediated loans: Intermediaries produce information *both* at the origination stage (lender due diligence) and on a more-or-less continuous basis after funding (monitoring).[85] Dynamic production of information in conjunction with covenant restrictions enables a lender to declare a loan in default and demand immediate repayment if necessary while still offering flexibility through renegotiation. The information-based models also generally do not explain why some borrowers are served in intermediated markets and others in the public debt markets and why the contracts offered in those markets differ so dramatically.[86] What has been missing in the theoretical literature until quite recently is a link between the theory of covenants, the mechanism of renegotiation, and the information-based theory of financial intermediation.

An initial attempt at a link was offered by Berlin and Mester (1992), who developed a theoretical model in which financial intermediaries extend loans that include restrictive covenants to borrowers. In their model, covenants are beneficial because they limit the problems discussed earlier. Berlin and Mester's financial intermediaries use observable, but not necessarily verifiable, information to form the basis for renegotiation; renegotiation is beneficial because it enables borrowing firms to invest in positive-value projects that they otherwise would have forgone because of covenant restrictions.[87]

In a more general setting than Berlin and Mester's, covenants can be viewed as a mechanism for triggering reevaluation of borrower riskiness by a financial intermediary. A covenant violation does not necessarily (and, indeed, usually does not) indicate that risk has increased.[88] It can occur, for example, because a borrower wishes to invest in a new value-enhancing project that would trigger a violation of a covenant restricting new investments. Lenders can determine the appropriate response to a violation only if they analyze the borrower's situation, that is, if they produce information at the time of the violation. Simple monitoring during the life of the loan is often of little use except insofar as it improves the lender's ability to respond to covenant violations because, in the absence of a violation, lenders typically cannot change the terms of the loan no matter what their monitoring reveals.

Because financial intermediaries have a comparative advantage over small individual investors in producing information about borrower risk and in facilitating renegotiation, loans with covenants, especially financial covenants, are in general naturally made by intermediaries. Also, intermediaries may have more incentive to consider granting a covenant waiver than individual investors, as individual investors that do not expect to make many loans regularly in the future may perceive that they have little to gain from granting a waiver, whereas intermediaries that regularly invest in the market may profit from a reputation for being constructively flexible. Such a reputation may give intermediaries another competitive advantage over individual investors in conducting information-intensive lending.

85. Campbell and Chan's (1992) model involves information production at both stages but does not consider many of the implications.

86. Only a few papers have attempted to explain the simultaneous existence of public debt and intermediated debt. Diamond (1991), for example, developed a model in which reputation determined whether firms were able move from (monitored) intermediated debt to (unmonitored) public debt. Although this model captures some of the essential features of the financial structure that we observe, it does not address the differences in the contracts offered in these markets. Moreover, it does not capture the dynamic nature of information production in conjunction with covenant restrictions, which was described in part 1, section 2.

87. Also, as pointed out by Smith and Warner (1979), renegotiation with a few well-informed intermediaries is less costly than renegotiation with the large number of investors, which is common in the public debt market. El-Gazzar and Pastena (1990) found empirically that dispersion of investor ownership is positively associated with the looseness of covenants.

88. That most renegotiations are not associated with firm deterioration is consistent with our discussions with market participants. Berlin and Mester (1992) also make this point, and the findings of Lummer and McConnell (1989) are consistent with it. The latter study showed that, in a sample of 357 revised bank credit facilities from the period 1976–86, 259 involved favorable revisions of terms.

This view of financial intermediation is our covenant–monitoring–renegotiation (CMR) paradigm. In the paradigm, information-intensive financial intermediaries serve information-problematic borrowers, *not so much because they can more efficiently produce information at the origination stage but because they can efficiently employ covenants to control bondholder–stockholder conflicts.*[89] In equilibrium, lenders entering into debt contracts that include covenants must be able to monitor efficiently, that is, must efficiently produce information throughout the life of the contract. Lenders monitor a borrower's performance for two reasons: to determine whether the borrower is in compliance with covenants and to determine the proper action in the event of a violation.[90] A covenant violation may indicate that the firm is in distress or signal that a borrower is taking actions not in the lender's interest. Covenant violations are a noisy signal about a borrower's prospects, however, because they can be based only on observable, verifiable information. To decide whether to liquidate a loan that is in technical default, to renegotiate its terms, or to waive the covenant, a lender must produce new information (including information that may not be verifiable) about the borrower, quite apart from simply determining whether the firm is in compliance with its covenants. This type of information production is often similar to that which occurs during loan origination.[91]

Berlin and Mester (1992) demonstrate theoretically that the combination of tight covenants and the option to renegotiate becomes more valuable as a borrower's observable quality declines. The intuition behind this result is straightforward. For low-quality firms, information-related problems are more acute. Therefore, low-quality firms benefit the most from the inclusion of restrictive covenants in debt contracts because these covenants provide a mechanism for credibly committing to abstain from behavior that exploits the firm's lenders. However, restrictive covenants have a high probability of being binding in the future. Hence, the option to renegotiate is very valuable, and the reputation of lenders very important.

Covenants may be pareto-improving in any debt contract because they can constrain borrower behavior. Covenants used in conjunction with a debt contract offered by a financial intermediary may be especially potent, for three reasons. First, fixed costs of information production are kept down. Second, renegotiations are most feasible and least costly when the number of lenders is small. Third, because a borrower is often at a bargaining disadvantage in the event of a violation, it will contract initially only with lenders with a reputation for fair dealing in renegotiations. With their long-term presence in the credit markets, intermediaries are most able to build and maintain such reputations. Tight covenants are not present in widely distributed debt because diffuse owners cannot efficiently produce information, renegotiate, or maintain reputations.

Private Placements in a Theory of Credit Market Specialization

The CMR paradigm illuminates the differences among the commercial bank loan market, the private placement market, and the public bond market. Because their liabilities have short terms, banks prefer to invest in short-term assets. Such a preference naturally leads them to specialize in (among other things) lending to quite information-problematic, generally small firms. The optimal contract for such borrowers has a short maturity because renewal can be based on nonverifiable information. It still includes tight covenants because the borrowers are so problematic. These are frequently violated for reasons not associated with increases in expected losses or risk, and so bank loans tend to be renegotiated frequently. Quite problematic borrowers accept restrictive terms because banks maintain a reputation for fair dealing and flexibility in renegotiation, because the covenant constraints have short terms, and because bank loans can typically be prepaid without penalty.[92]

89. Information production in the form of credit evaluation at the origination stage also occurs for traded debt but is not necessarily performed by the investors in the securities. Investment bankers perform due diligence as part of their responsibility as underwriters; the results of their evaluation are disclosed in the offering prospectus. Rating agencies also perform due diligence and reveal its results. Consequently, the CMR paradigm captures the distinguishing feature of intermediated debt: the role of information production *after* debt funding.

90. Debt contracts almost always include provisions requiring borrowers to report any violation of covenants, so monitoring for compliance is the less important of the two reasons.

91. Using covenants to trigger re-evaluations is both cost-effective and legally necessary. Continuously conducting full evaluations would be too costly for lenders. Also, an enforceable mechanism for putting a loan into technical default must be based on information that is observable and verifiable by all parties.

92. See Berlin (1991) and Hart and Moore (1989) for a formal model of the maturity structure of loans and the verifiability of information.

Because their liabilities have long terms, life insurance companies prefer to invest in long-term assets such as private placements, with fixed interest rates and call protection. Since the renewal–refusal mechanism for controlling risk is absent in such loans, life insurance companies rely more than banks on their ability to demand payment based on covenant violations, that is, on verifiable events. However, covenants are also less effective as a risk-control mechanism in long-term debt. Thus, in equilibrium, issuers of private placements tend to be less problematic, and covenants in private placements tend to be looser than in bank loans.[93] As a result, private placement covenants are less frequently violated and renegotiated. With less frequent renegotiation, borrowers are more willing to rely on a lender's reputation for fair dealing, rather than on an ability to prepay without penalty if renegotiations go sour. Since reputation is important, the equilibrium can work only if private placements are fairly illiquid so that borrowers are assured of continued dealings with good lenders.[94] Thus the public bond market is not well suited to information-intensive lending. Although renegotiation occurs less frequently than in bank loans, not uncommonly a private placement is renegotiated several times during its life span. Life insurance companies invest significant resources in monitoring capacity (although not so many as banks do).

Public market borrowers pose relatively few information problems for lenders. Thus, publicly issued bonds can have long terms, and a relatively few, loose covenants are adequate. Intensive monitoring is unnecessary, and renegotiation is infrequent. Given these characteristics, ownership of public debt can be diffuse rather than concentrated, and the contracts can be liquid.[95]

The CMR paradigm is not inconsistent with the traditional view of market segmentation, which focuses on transactions costs and regulation in explaining the institutional structure of credit markets. The traditional view is simply incomplete. In a sense, the traditional view emphasizes the liability side of bank and life insurance company balance sheets and largely ignores the asset side. The CMR paradigm focuses on the asset side. Consistent with the traditional view, the CMR paradigm indicates that long-term (short-term) loans appeal to life insurance companies (banks) because they match the maturity of their liabilities. However, it emphasizes that in equilibrium long-term and short-term lenders will tend to serve different classes of borrowers and to use somewhat different risk-control technologies.

Other Empirical Evidence Relevant to the Theory of Credit Market Specialization

The CMR paradigm is consistent with empirical evidence indicating that financial intermediaries act as specialists in information production. James (1987) found a positive stock-price response to the announcement of bank credit agreements. This result is consistent with the notion that banks produce information about firm quality and reveal this information through their credit decisions (an approved bank credit agreement is a positive signal to the market); it contrasts with the results

93. Of course, private placement borrowers typically obtain their short-term working capital from commercial banks. They may also have other short-term credit facilities with commercial banks.

As noted, there are differences between the bank debt and the private placement contracts of private placement issuers (bank debt contracts have more restrictive maintenance covenants). Such differences may arise from specialization by intermediaries. However, a short-term callable bank loan is not comparable to a long-term noncallable private placement because the bank loan can always be paid off and refunded whereas a private placement locks in a borrower for a substantially longer time. Therefore, a private placement that has the same covenants as a bank loan will be much more restrictive, in effect, than the bank loan because it is noncallable and has a longer maturity. The issue of simultaneously outstanding bank debt and private placements notwithstanding, the principal distinction we are drawing in the CMR paradigm is between those borrowers that depend strictly on the bank loan market (and have no access to long-term debt in the private placement market) and those firms that have access to the private placement market. That is, we are principally comparing the bank debt contract of bank-dependent borrowers with the private placement contracts of borrowers who are not bank dependent.

94. There are additional reasons that information-intensive debt is illiquid. When selling such debt contracts, originators must do so at a discount because buyers in the secondary market have to be compensated for their due diligence at the time of purchase and such compensation cannot come from fees charged to the borrower. Also, borrowers may be less cooperative in assisting due diligence at resale than at origination.

95. Berlin and Loeys (1988) demonstrate theoretically that lower-quality firms (that is, firms with a higher probability of deteriorating) are likely to prefer an intermediated loan with tight covenants because the incremental value of hiring a delegated monitor to produce information about their true condition is higher. Monitoring is inefficient, however, if debt of a lower-quality firm is publicly held because each bondholder will have an inadequate incentive to monitor after weighing the private gains from monitoring against benefits. That is, holders of public bonds do not enjoy the economies of scale of information production available to a financial intermediary. Consequently, publicly issued debt tends to be most attractive to issuers of high quality and to firms about which much information related to their financial condition is publicly available.

of numerous studies documenting a negative stock-price reaction to the issuance of public securities.[96] One study subsequent to James (1987) indicates that the positive stock price response is confined to renewals (Lummer and McConnell, 1989), but another finds an effect for both new and renewed loans (Billet, Flannery, and Garfinkel, 1993). Wansley, Elayan, and Collins (1991) find that the availability of other signals of firm quality is important. All of these studies conclude that the uniqueness of bank loans stems from the ability of banks, as financial intermediaries, to produce information not otherwise available in the market. Bailey and Mullineaux (1989) and Szewczyk and Varma (1991) document a similar positive stock-price response to the announcement of a private placement arrangement, suggesting that life insurance companies perform the same type of information production that commercial banks do.

Also consistent with the CMR paradigm is evidence that banks may have an advantage over insurance companies in the production of information about their borrowers. Besides helping to explain banks' preference for short-term lending, such evidence helps explain why banks lend to a more problematic group of borrowers. Nakamura (1993), for example, argues that banks have a special advantage over other financial intermediaries because they obtain information from borrowers' checking accounts. This information is valuable because patterns in checking account activity can signal changes in a firm's quality. Udell (1986) and Allen, Saunders, and Udell (1991) show theoretically and empirically that banks can sort borrowers by manipulating the prices of their multiple services, including demand deposits and loans. The more intensive information production by banks may also explain the contradiction between results found by Bailey and Mullineaux (1989) and Szewczyk and Varma (1991), which show a positive stock response to private placements, and other studies. James (1987) and Banning and James (1989) found a negative response, mostly associated with private placements that were used to repay bank debt. Vora (1991) found a positive response but only for unrated firms.[97]

The CMR paradigm is consistent with empirical evidence on corporate restructuring and bankruptcy. Gilson, John, and Lang (1990) found that the probability that a firm would be restructured privately (versus entering formal bankruptcy) was positively related to the ratio of private debt (bank loans plus private placements) to total debt. They also found that stock returns (that is, cumulative abnormal stock returns) were significantly higher on average for announcements of private restructurings (for which the returns were positive) than for bankruptcy (for which the returns were negative). One explanation for these results is that, in a private restructuring, firms avoid the direct and indirect costs associated with bankruptcy, which may total as much as 20 percent of firm value (see Warner, 1977, and Weiss, 1990, on direct costs; and Altman, 1984, Cutler and Summers, 1988, and Lang and Stultz, 1991, for indirect costs). As noted earlier, one advantage to intermediated debt is that it facilitates renegotiation. Hence, lower-quality firms with a higher probability of future distress value the renegotiation mechanism offered by financial intermediaries more than do higher-quality firms.[98] Other things being equal, such firms will thus prefer to issue private rather than public debt. Another explanation for the higher cumulative stock returns associated with private restructurings is the possibility that relatively higher-quality firms signal their value by choosing to restructure privately.

Gilson, John, and Lang (1990) also examined stock returns at the time that the market first learned that a firm was in financial distress. They found that those firms subsequently entering bankruptcy proceedings suffered negative cumulative returns on average when the market first learned of their financial distress, whereas those firms subsequently restructured privately suffered no negative cumulative returns.

Taken together, the Gilson, John, and Lang results are generally consistent with the CMR paradigm. Financial intermediaries can use information produced through borrower monitoring in conjunction with restrictive covenants to begin negotiations leading to a restructuring before a firm deteriorates beyond a point of no return. That is, financial intermediaries may be able to intervene at the earlier stages of firm distress because of three characteristics of intermediated debt contracts: covenant restrictions, monitoring by

96. See Smith (1986) for a survey of this literature.

97. Alternatively, the methodology employed in these studies may be too weak to capture the empirical relationship between stock returns and announcement effects in private placements. One problem may be identifying when information about a private placement is released to the market. The long time involved in agenting a private placement may make identifying an appropriate event window difficult.

98. Lower-quality firms also value covenant restrictiveness when combined with renegotiation flexibility.

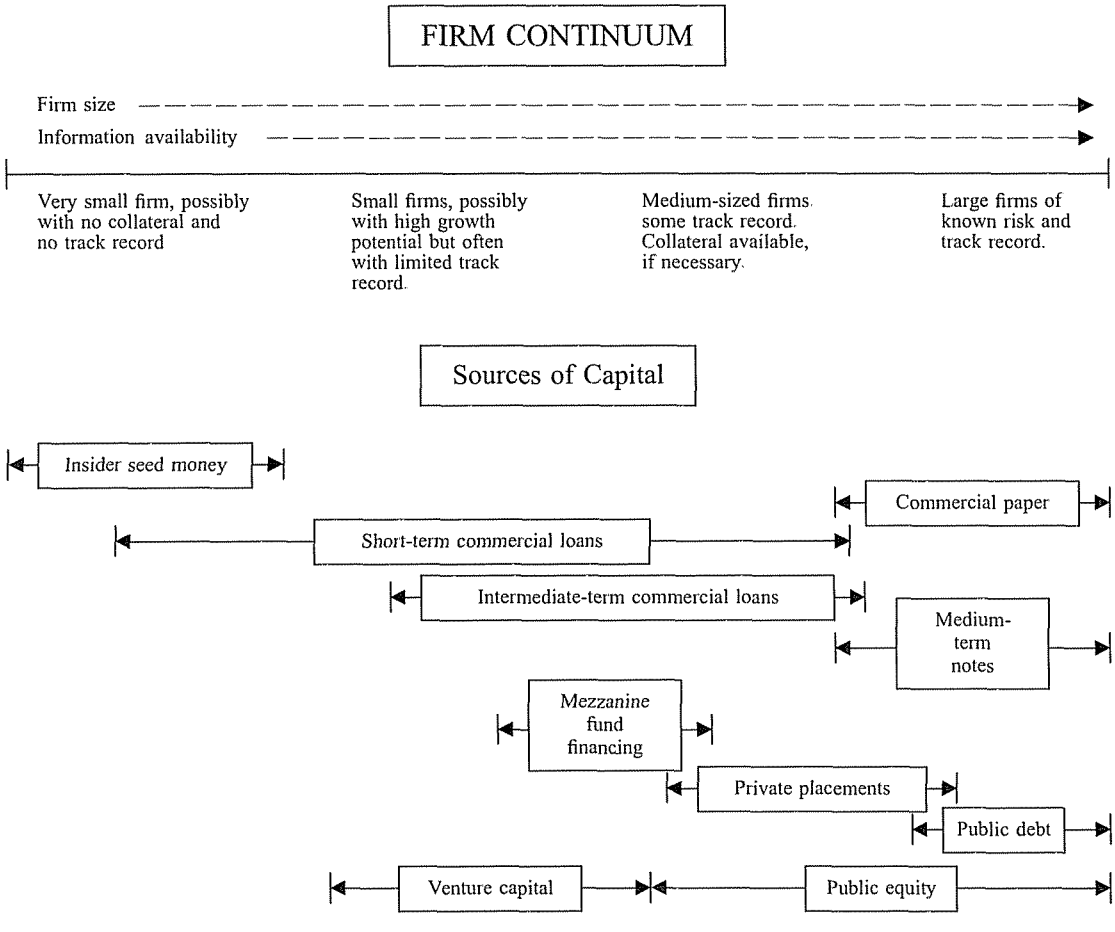
lenders, and the flexibility in renegotiation that is associated with a limited number of lenders. Therefore, among those firms that suffer distress, those with intermediated debt are more likely to restructure privately. Firms without intermediated debt, however, are likely to suffer more deterioration before negotiations begin and are more likely to enter bankruptcy. This finding is also consistent with the results of Franks and Torous (1990), who found that firms filing for bankruptcy are generally in poorer condition than those restructuring privately. In particular, bankrupt firms are less liquid and less solvent than those that work out their debt in private restructurings.

Summary of Part 1

The arguments and evidence presented in part 1 of this study imply that, as shown in the following diagram, firms can be placed on an information continuum corresponding to their access to different debt markets. At one end of the continuum are small, new, extremely information-problematic firms that require a prohibitive amount of evaluation and monitoring and that have little or no collateral to offer prospective lenders. Such firms must either use internally generated funds or obtain outside equity financing (perhaps from venture capitalists).[99] Slightly less problematic, larger firms migrate to commercial finance companies and commercial banks, which provide short-term loans with tight covenants, intensive

99. Venture capitalists can be viewed as agents who, acting as insiders, produce information about the prospects of new firms. They design tailored contracts that combine a high measure of control with a risky claim on the success of the firm. See Chan (1983) or Chan, Siegal, and Thakor (1987) for a formal model of the role of venture capitalists in an information-theoretic setting.

Graphical Summary of Part 1



monitoring, and the renegotiation option. These firms tend to be risky and often borrow on a secured basis.[100] Somewhat larger firms may be able to obtain intermediate-term bank financing or subordinated debt financing from mezzanine debt funds or equity funds. Like bank loan officers, mezzanine fund and equity managers intensively monitor their borrowers. They also control information-related contracting problems partly by exercising some control through their share of the borrower's equity. Somewhat stronger borrowers obtain bank credit on an unsecured basis from commercial banks. Even less information-problematic firms have access to the private placement market. These firms still have enough information problems to require the services of an intermediary, but they are generally not so problematic as commercial bank borrowers. Thus they can issue long-term debt with looser covenants than those that exist in the bank loan market. Finally, firms that pose minimal information problems for lenders can issue in the public debt markets.

100. Several theoretical papers have shown that collateral may be a powerful tool in solving information-related problems associated with debt contracting (see Chan and Kanatas, 1985, Chan and Thakor, 1987, and Besanko and Thakor, 1987a and 1987b). Finance companies and commercial banks frequently require collateral as part of their loan contract (see Berger and Udell, 1990 and 1993b). Much evidence suggests that secured lending tends to be associated with riskier borrowers (see Berger and Udell, 1990, 1993a, and 1993b, Boot, Thakor, and Udell, 1991, and Swary and Udell, 1988).

Part 2: Secondary Trading, the New Market for Rule 144A Private Placements, and the Role of Agents

In focusing on an economic analysis of the traditional market for privately placed debt, part 1 ignored two important features of that market: the effects of Rule 144A and the role of agents.

Though resale of private placements is sometimes thought to be prohibited, in fact a small secondary market for them has existed for decades. Rule 144A, however, has created a new market for private placements. Adopted in April 1990 by the SEC, this rule establishes conditions under which private placements may be freely traded among certain classes of institutional investors. The rule has spawned the development of a market for underwritten private placements, which has characteristics—such as not being information intensive—more like those of the public bond market than like those of the traditional private market. Part 2, section 1, analyzes the Rule 144A market.[101]

The great majority of new private issues are assisted by an agent, which offers many of the advisory and distribution services of a public bond underwriter but does not actually perform a firm-commitment underwriting, except with underwritten Rule 144A issues. Agents are at the nexus of many private market information flows and thus play an important role. Section 2 describes their role.

1. The Rule 144A Market

Rule 144A gave securities firms the opportunity to underwrite private placements, allowing new issues of private debt to be distributed in much the same way as issues in the public bond market. Securities firms have taken advantage of this opportunity by providing public-like borrowers an alternative to the public market and the traditional private placement market. The 144A market thus bridges a gap between the two existing markets by making available to large corporations, not having the information problems of the typical issuer of private debt, a more efficient means of placing debt in the private market.

Although Rule 144A applies only to certain secondary market transactions, it has implications for the distribution of private placements. The rule permits sophisticated financial institutions, designated in the rule as qualified institutional buyers (QIBs), to trade private placements freely among themselves without jeopardizing the exemption of the securities from SEC registration. In any private placement transaction, whether in the primary or in the secondary market, the seller must ensure that the sale does not constitute a public offering, which would violate the basis for exemption. Before the adoption of Rule 144A, securities firms did not underwrite private placements because sales of securities to investors as part of an underwritten distribution might be construed as a public offering. Rule 144A, however, takes the view that QIBs are not part of the public; consequently, transactions between QIBs cannot involve a public distribution. Most securities firms are QIBs, and thus they can purchase private placements from issuers and resell them to other QIBs without violating the private placement exemption.

The SEC justified this treatment of QIBs on the grounds that the Congress had never considered sophisticated, institutional investors to need the protection offered by the registration of securities. The purpose of registration was to protect unsophisticated, individual investors. The SEC therefore concluded that, if secondary transactions involved only sophisticated investors, such transactions would not constitute a public distribution and thus could be effected without restriction.[102]

The SEC had two basic purposes in adopting Rule 144A. One was to increase liquidity in the private placement market and thus to lower the differential between private and public yields. The other was to make the private placement market more attractive to foreign issuers. Foreign companies had been infrequent issuers in the public markets, primarily because they found the registration requirements expensive and burdensome, especially the stipulation that financial statements be reconciled with generally accepted accounting principles in the United States.[103] Although foreign companies have long been able to bypass these obstacles by issuing private placements, they had not done so to any great extent, partly because

101. Rule 144A applies to both debt and equity securities, but the discussion in this section focuses only on debt securities.

102. SEC (1988), pp. 97–102.

103. Despite appearances, the burden of registration and disclosure requirements may be less than many potential foreign issuers have perceived it to be. See Engros (1992), pp. 5–9.

of the higher yields in the private market than those in the public market. The negotiation of terms and frequent inclusion of restrictive covenants in private debt contracts also made the private placement market unattractive to foreign companies.

As defined in Rule 144A, QIBs are financial institutions, corporations, and partnerships that own and invest on a discretionary basis at least $100 million in securities.[104] This definition is broad enough to include life insurance companies, pension funds, investment companies, foreign and domestic commercial banks, master and collective bank trusts, and savings and loan associations. Besides meeting the securities test, banks and savings and loans must have net worth of at least $25 million. The SEC imposed this condition because it believed that securities holdings alone did not necessarily reflect the appropriate degree of investor sophistication for institutions having insured deposits.[105] In contrast to other institutional investors, a broker–dealer must own only $10 million in securities to qualify as a QIB. The SEC chose a lower amount to avoid excluding a significant number of broker–dealers that were actively participating in the private placement market.[106]

Besides confining transactions to QIBs, Rule 144A stipulates three other conditions. First, to ensure that a minimum amount of information is available, an issuer must provide buyers with copies of its recent financial statements and basic information about its business. Second, when issued, privately placed securities cannot be of the same class as any of the issuer's securities already traded on a U.S. stock exchange or on the NASDAQ system. This requirement is intended to prevent the development of an institutional market in publicly traded securities. Third, the seller of 144A securities must take "reasonable" steps to inform the buyer that the sale is occurring pursuant to Rule 144A.[107]

104. Bank deposit notes and certificates of deposit, loan participations, repurchase agreements, and currency and interest rate swaps are excluded. When it adopted Rule 144A, the SEC excluded U.S. government and agency securities as well; amendments to the rule in October 1992 removed the exclusion.

105. SEC (1990a), pp. 17–20.

106. SEC (1990a), p. 21.

107. Further details on the provisions of Rule 144A, the SEC's reasons for adopting the rule, and its justification are in appendix A.

Features of the Market

Although the SEC adopted Rule 144A only in 1990, the 144A market has developed so that it is easily distinguished from the traditional private placement market. In our view, the essential feature of the new market is that it is not information intensive, which is to say that it has taken on the main features of the public bond market. The most visible and discussed similarity to the public market has been the underwriting of 144A offerings. Indeed, this aspect serves as the basis for our definitions of a 144A security and the 144A market.[108]

Nature and Size

Measuring the development of the underwritten 144A market is especially difficult because many market participants, as well as the information services that collect data on the private placement market, consider a 144A security to be any private placement that relies upon the documentation required for a financing pursuant to Rule 144A. Unfortunately, this definition includes private placements that are, other than the documentation, no different from traditional private placements. Thus, relying upon these data, for which we have no alternative, necessarily leads to an overstatement of the size of the underwritten 144A market.

Using the broad definition, gross issuance of 144A securities has expanded rapidly since the inception of the 144A market in 1990. The volume of offerings in 1992 was about $33 billion, almost double that in 1991 (the first full year the rule was in effect) and nearly two-thirds of the volume in the traditional market (table 9).

The difficult question to answer is, How much of the broad measure of 144A issuance has been underwritten? No direct estimates have been made, but an indirect estimate of underwritten issuance can be obtained by assuming that issues with two or more credit ratings have been underwritten. Underwritten offerings, whether in the public market or the 144A market, typically have at least

108. In this regard, some have argued that underwriting is not a meaningful distinction because most underwritten securities have been sold before the formal offering. Although this situation may be true, our view is that underwriting is characteristic of a non-information-intensive market, which in turn is the critical feature of the 144A market. The focus on underwriting is partly a matter of convenience, but it also coincides with a view held by many market participants that underwriting is the distinctive feature of the 144A market.

9. Gross issuance of public and private debt securities in U.S. markets, 1989–92

Billions of dollars

Issuance	1989	1990	1991	1992
Rule 144A private placements	. . .	2.2	16.7	33.3
By foreign issuers	. . .	.4	5.5	10.5
Non-Rule 144A private placements	134.8	101.0	75.8	52.4
By foreign issuers	20.3	15.8	12.5	9.4
Public bonds	188.9	203.6	307.1	401.8
By foreign issuers	9.2	14.8	20.2	24.1

SOURCE. IDD Information Services and Securities Data Corporation.

two ratings because the underwriters otherwise incur significantly higher regulatory capital charges. Available information from the SEC shows $4.4 billion of 144A issues with at least two ratings in 1991 and $6.0 billion in the first eleven months of 1992.[109] These figures are roughly in line with market estimates, which place underwritten issuance in 1991 at slightly more than $3 billion and in the first half of 1992 at roughly double that pace.[110] Even the larger figures from the SEC suggest that the underwritten market is still in an early stage of development.

Characteristics of Underwritten 144A Securities

Besides being underwritten, 144A securities have assumed many other features of publicly offered bonds. The terms and documents generally conform to the standards used in the public market; in particular, bonds have "public style" covenants, which are fewer and considerably less restrictive than those found in traditional private placements. Underwriters charge roughly the same fees as those for a public offering, but the issuer avoids the considerable expenses associated with public registration. The underwritten 144A securities also generally have two credit ratings; and, in many instances, the offering memorandum is styled like a prospectus in a public offering. Also, 144A offerings are usually transferred through the book-entry system operated by the Depository Trust Company. All of these features are a part of underwriters' efforts to market 144A private placements to traditional public market investors, such as mutual funds, pension funds, and groups within life insurance companies responsible for public bond investments.[111] Furthermore, underwritten private placements have been comparable in size more to public offerings than to traditional private placements: In 1991, for example, the average issue for 144A securities, broadly defined, was $92 million, nearly double that for non-144A placements. Finally, the terms of the securities are rarely negotiated with investors but are typically set before the offering.

Despite this similarity to public bonds, underwritten 144A securities generally have not yet achieved the same degree of liquidity as public bonds, and thus their yields contain a premium.[112] In the first year of the market, the premium was reported to be about the same as that on traditional private placements. More recent reports suggest, however, that the liquidity of 144A securities has increased and that the premium has decreased, as major dealers have allocated capital and traders to making markets for 144A securities.[113]

Foreign Issuers

Thus far, the proportion of foreign issuance has been greater in the 144A market than in either the traditional private or the public bond market. Based upon the broad measure of 144A issuance, approximately one-third of the total volume of 144A offerings in 1991 and 1992 was accounted for by foreign issuers, including U.S. subsidiaries of foreign companies. In contrast, 17 percent of the traditional private placements and 6 percent of the public offerings were by foreign issuers.

Several factors lie behind foreign use of the 144A market. One is that the adoption of Rule 144A itself served to publicize the already existing advantages of the private placement market to foreign companies. Thus, the effect of the rule has been to alter foreigners' perception that all offerings in the United States are subject

109. SEC (1993), appendix A. The report does not cover all the 144A issues used to compute the totals in table 9. The report examined issues totaling $7.6 billion in 1991 and $8.0 billion in the first eleven months of 1992.

110. See *Investment Dealers' Digest* (1992), pp. 13–14, and Keefe (1992), pp. 1 and 10.

111. In this regard, a major underwriter noted that 70–95 percent of 144A placements during the first half of 1992 had been sold to public investors. See Vachon (1992b), pp. 23–24.

112. An additional reason for the premium is that investors typically demand a slightly higher rate from foreign issuers and from first-time issuers.

113. Keefe (1992), p. 10.

to excessive regulatory burdens. Indeed, market participants concede that some of the foreign issuance done under Rule 144A could have been as easily accomplished before the rule's adoption.[114] Moreover, since the rule's adoption, investment banks have devoted greater effort to bringing foreign issuers to the private placement market. A second factor boosting foreign issuance has been the low interest rates in the United States relative to those in European countries. The increase in 1991 in foreign issuance in the public bond market and the record pace of offerings in 1992 attest to the yield advantage in U.S. markets. A final factor is that the premium in yields on foreign bonds issued in the private placement market has declined.

Among other aspects of foreign issuance in the 144A market, many foreign issuers have been well-known corporations, but at the same time, about 20 percent of the issues have come from first-time borrowers in the United States.[115] The major sources of issuance from abroad have been the United Kingdom and Mexico. Through November 1992, more than half of the foreign issues studied by the SEC were involved in global offerings, and virtually all the global offerings originated with an offshore entity. In contrast, about half of those foreign-related offerings confined solely to the 144A market involved U.S. subsidiaries of foreign corporations.[116] About 50 percent of the volume of foreign 144A securities in 1991–92 came from financial institutions, and most of that was in medium-term notes.

Domestic Issuers

Despite the attention given to foreign use of the 144A market, U.S. companies have accounted for nearly 70 percent of the volume through 1992. Domestic issuers in the 144A market have typically been those companies with special circumstances that preclude issuing in the public bond market, where yields are lower. In some cases, the companies have not wanted to spend the time nor incur the expense required to register the securities with the SEC. Among these have been private companies that, in the past, have borrowed in the traditional market but have now found more favorable pricing in the 144A market. Also included are nonregistered subsidiaries of publicly registered parents that have issued debt in the subsidiaries' names. In other cases, companies with outstanding public securities have turned to the underwritten 144A market to protect the confidentiality of the specific circumstances leading to the borrowing.

Another group of domestic companies has used the 144A market as a temporary alternative to the public bond market. These companies normally issue public securities but have turned to the 144A market to avoid any delays arising during the registration process that could cause issuers to miss favorable financing opportunities. The 144A private placements sold under these circumstances have included registration rights, which obligate the issuer to register the bonds with the SEC within a specified time. Failure to do so results in the bonds' carrying higher coupon rates. Most companies selling these types of 144A securities have been rated below investment grade.

Investors

During the first two years after the adoption of Rule 144A, life insurance companies were the largest group of investors in 144A securities. As the 144A market has developed features of the public bond market, however, the composition of investors has shifted toward those, such as mutual funds and pension funds, that generally concentrate investments in public securities. Information on buyers of 144A securities from a sample of new issues studied by the SEC implies that the share of life insurers' purchases of straight debt fell from roughly 75 percent between April 1990 and August 1991 to 60 percent between September 1991 and April 1992 (SEC, 1993). Over the same two periods, the combined share of mutual funds and pension funds rose from a little over 10 percent to nearly 40 percent. Market participants indicate that the composition of buyers has continued to shift toward mutual funds and pension funds and, in addition, that many life insurance companies have shifted responsibility for investing in 144A securities from their private placement groups to their public market groups. Thus, the dominance of the life insurance companies in the later period of the SEC study likely understates the growing significance of public market investors in the 144A market.

Public market investors are attracted to the 144A market because its public-like features suit their investment style. In contrast to the buy-and-

114. Engros (1992), p. 7.
115. *Private Placement Reporter* (1992a), p. 10.
116. SEC (1993), appendix A.

hold strategy of investors in traditional private placements, many public market investors follow a total-return strategy in which they attempt to increase the return beyond the security's coupon rate of interest. To do so, these investors look for undervalued securities offering the potential for capital gains.[117] Such investors require liquidity, because they do not expect to hold the securities to maturity. From this perspective, public market investors have found the liquidity in the 144A market to be sufficient.

In contrast to the move of public market investors to the 144A market, buyers of traditional private placements are unlikely over time to find this market attractive. The comparative advantage of traditional market investors is in credit analysis and credit monitoring, neither of which is required extensively in the 144A and public markets. And, in the buy-and-hold strategy of traditional investors, liquidity is of little importance.

Prospects for Development

Because it has filled a gap in U.S. capital markets, the underwritten 144A market appears likely to undergo further development and growth. Before the adoption of Rule 144A, no market existed that could accommodate large issues that were unsuited for the public market but did not require an information-intensive market. Issuers of this nature, whether domestic or foreign, had no choice in U.S. markets but to accept the terms of the private market. Although such issuers often did not have to tolerate restrictive covenants, they had to pay a premium over public bond rates because of the lack of liquidity in the private placement market. By increasing liquidity, Rule 144A has reduced the premium and has thus increased offerings by such issuers.

In being both non-information-intensive and private, the 144A market represents a new bond market. Whether the need for such a market extends much beyond current levels of activity is an open question. The midsized, information-problematic firms, which issue in the traditional market, will probably not move to the 144A market. They must borrow from a financial intermediary and often do not want their issues to be traded in a liquid market to investors that might not understand their particular circumstances.

Perhaps, the greatest potential for the 144A market lies in its use by foreign issuers, inasmuch as they represent the largest group of borrowers with no previous satisfactory alternative in the United States. If foreign issuance expands significantly, Rule 144A may prove helpful in integrating world capital markets. Borrowing by large, domestic corporations with specialized requirements seems to offer much less potential, as such borrowing constitutes a small share of the credit needs of large corporations. If, however, the liquidity of the 144A market increases so that yields in the public and 144A markets are roughly the same, a considerable portion of public market borrowing may shift to the 144A market, which would offer lower borrowing costs overall because of the absence of registration costs.

2. The Role of Agents

Almost all new public issues of bonds are managed by an underwriter on the basis of a firm commitment. New issues of private placements, however, are often assisted by an agent or adviser.[118] Agents provide various services to issuers, including advice about the structure, pricing, and timing of financings; assistance in locating investors; and help in negotiating with them. Agents assist traditional private issues on a best-efforts basis, but many Rule 144A transactions are firm-commitment underwritings. Although no quantitative evidence is available, remarks by market participants indicate that an agent assists in about two-thirds of traditional private issues; the rest of these issues involve direct contacts between issuers and investors. Apparently, although lenders and borrowers in the private placement market might be able to find each other and write contracts by themselves, such a process would be costly; in many cases, employment of a third-party agent is more efficient.

The role of agents in the private placement market is somewhat more complicated than the

117. One element of this strategy is identifying companies likely to undergo a credit-rating upgrade. Credit analysis is used for this purpose but is not essential for ensuring the long-run value of the security, as in investing in traditional private placements. Consequently, public market investors perform much less extensive credit analysis and monitoring than investors in traditional private placements. Public market investors also tend to rely more upon the research of investment banks and other outside credit analysts.

118. Technically, an agent has the power to commit the issuer, whereas an adviser does not. We use the word *agent* to refer to both.

previous paragraph may imply. Like the private market itself, the agent industry exists primarily to solve problems associated with costly and asymmetric information. Agents add value in several ways:

- They reduce search costs for both borrowers and lenders by maintaining information about lenders' preferences and by screening out unqualified borrowers.[119]
- They have knowledge of prevailing market prices and the tradeoff rates between prices and other contract terms. Borrowers need such information for both search and negotiation, and buying it from an agent is often cheaper than gathering it.
- They provide technical advice and other assistance to borrowers during negotiations, helping them obtain better terms.
- They enforce informal bargaining conventions that reduce bargaining costs for everyone.

The private market is thus broader and deeper than it would be without agents: More borrowers are served, and more competition exists among lenders.

The structure of the agent industry is influenced by economies of scale and scope, by limited strategic relationships between agents and lenders, and to some extent by specialization. The primary economy of scope is with the provision of other corporate financial services: Agents tend to flourish in those large commercial banks and investment banks that sell a large volume and variety of corporate finance products, such as loans or underwritings. The relationship officers of such banks can refer significant numbers of potential clients to the private placement agents within the organization. Economies of scope also exist with public-issue underwriting, in that sales forces for public securities can distribute some private placements.

The primary economy of scale is related to the costs of gathering information. These costs are smaller for high-volume agents for two reasons. First, the fixed costs of gathering information can be spread over many clients. Second, an agent acquires information as a byproduct of assisting individual transactions, both reducing the amount of information it must gather by other means and providing more to trade in the information marketplace. Agents and lenders gather information through informal sharing arrangements with each other, and high-volume participants are more sought after as partners in such arrangements.

Economies of scale and scope influence an agent's style of providing services as well as the degree of concentration of the industry. Although most agents are in large measure generalists, they have some variety in the technologies they can choose when conducting their business, especially with regard to the distribution of securities. They also tend to specialize somewhat in the technologies best suited to the kinds of client their host organization's relationship officers tend to refer.[120]

Although large agents may have advantages, competition appears substantial because entry and exit costs are relatively low and the roster of agents is constantly changing.

Who Are the Agents?

According to a database supplied by the publishers of the *Investment Dealers Digest*, thirty investment banks and commercial banks were responsible for 96 percent of the volume of all agented privately placed debt transactions from 1989 through 1991 (see table 10). Each of these agents placed at least $1 billion of debt securities during at least one of those three years. The database, however, does not include all new private issues. Possibly, a table based on a complete list of transactions would change the ranking somewhat and would add entries to the list.[121]

The Stages of a Private Placement Transaction

This subsection describes the role of the agent at each stage of private placement issuance, emphasizing the ways in which agents add economic value to the transaction. Readers not already

119. For example, some lenders may offer better terms than others to borrowers in a particular industry, perhaps because they have particular expertise in lending to that industry.

120. For example, some agents assist mainly large placements (say, more than $100 million in face value), some serve mainly investment-grade borrowers, and others serve mainly below-investment-grade borrowers. Some agents may get a disproportionate share of a given industry's business.

121. The total number of agents of private placements is unknown because many banks, investment banks, and "boutiques" act as agents for relatively small volumes of issuance. The IDD data files for 1989–91 list 173 organizations as agents, many of them for only one or a few transactions in a single year. Many agents with a relatively small volume of business do not report their transactions to IDD. Market participants' off-the-cuff estimates of the total number of currently active agents range from 100 to 300.

10. Major agents of U.S. private placements of debt, 1989–91

Agent	Rank according to business volume[1]			Three-year agent volume	
	Private placement agenting	Investment banking	Commercial banking	Amount (millions of dollars)	Percent of total
Goldman Sachs	1	2	. . .	37,469	11.7
First Boston	2	4	. . .	32,143	10.0
Salomon Brothers	3	7	. . .	25,811	8.1
J.P. Morgan	4	12	8	22,075	6.9
Merrill Lynch	5	1	. . .	19,574	6.1
Lehman Brothers	6	3	. . .	16,635	5.2
Citicorp	7	([2])	1	14,485	4.5
Chase Manhattan	8	. . .	5	13,264	4.1
Morgan Stanley	9	6	. . .	12,908	4.0
Drexel Burnham	10	n.a.	. . .	12,246	3.8
PaineWebber	11	11	. . .	11,726	3.7
FNB Chicago	12	. . .	10	11,009	3.4
Chemical Bank	13	. . .	2[3]	10,708	3.3
Bankers Trust	14	. . .	20	10,167	3.2
Kidder Peabody	15	5	. . .	8,387	2.6
Continental Bank	16	. . .	13	6,460	2.0
Bank of America	17	. . .	3	6,164	1.9
Manufacturers Hanover	18	. . .	2[3]	5,740	1.8
Donaldson Lufkin	19	10	. . .	4,022	1.3
NationsBank/NCNB	20	. . .	4	3,714	1.2
Dillon Read	21	([2])	. . .	3,517	1.1
Bear Stearns	22	8	. . .	3,125	1.0
Smith Barney	23	14	. . .	2,997	.9
Capstar Partners	24	. . .		2,634	.8
Prudential-Bache	25	9	. . .	2,566	.8
Dean Witter	26	15	. . .	1,929	.6
Wertheim Schroder	27	. . .	. . .	1,802	.6
Lazard Frères	28	. . .	. . .	1,184	.4
Barclays	39	. . .	. . .	1,159	.4
Alex Brown	30	13	. . .	1,091	.3

1. Investment and commercial banking ranks were determined using underwriting and loan volumes respectively.

2. Dillon Read and Citibank were the eleventh and twelfth ranked investment banks for investment grade debt respectively.

3. End-of-1991 consolidated loans were combined for Chemical and Manufacturers Hanover in arriving at a bank ranking.

SOURCES. Noted in text.

familiar with the details of private issuance may find the description of a sample private placement transaction that appears in appendix F helpful at this point. The example provides a sense of the flow of the process that may be useful background for the analysis in this section.

As shown in the following diagram, a deal passes through five major stages. During the prospecting stage, agents identify potential issuers and compete with each other to gain the issuer's business. Issuers decide whether to place a private issue or to use another vehicle for financing and whether to hire an agent or to issue without assistance.

During the contract design stage, and sometimes during prospecting, agents analyze in detail an issuer's condition, operations, and plans (due diligence) and use this information to set major debt contract terms. They summarize the terms on a term sheet and write an offering memorandum describing the issuer, which is somewhat similar to a prospectus. The memorandum and term sheet are often packaged together and called "the book." If necessary, agents seek a rating of the issue. They then choose an initial strategy for distribution and, in some cases, carry out preliminary inquiries of investors.

During the distribution stage, which is coincident with the design stage for many deals, the agent seeks investors. Negotiations that change the term sheet often occur. In some cases, the agent first seeks a lead lender (traditionally, the investor that buys the largest fraction of the placement) and conducts most negotiations with it; only after the lead has committed to the deal does the agent attempt a broader distribution. In other cases,

Stages of private placement issuance

Stage	Activities and events
Prospecting	*Client* (issuer) identification
	Competition among agents
	Due diligence by agents
Design of major contract terms	Writing of offer memo and term sheet
	Pre-rating by NAIC or rating agency
	Decision about strategy of distribution
Distribution	Solicitation of investors
	Circling by investors
Due diligence by lenders	Due diligence by lenders
	Investment committee approvals
	Formal letters of commitment
Contract writing	Negotiations on exact language and terms
	Closing

the agent attempts a broad distribution from the beginning. An initial commitment by a lender is known as "circling" the deal. Such a commitment is contingent on approval by the lender's investment committee and on due diligence by the lender that produces satisfactory verification of the information in the offering memorandum. Negotiations about price are conducted in terms of spreads over Treasuries of comparable average life until a deal is fully subscribed, at which time coupon rates are set.[122] If necessary to attract additional investors, the coupon rate may be increased after it has been set, but it may not be reduced even if Treasury rates fall between rate-setting and closing. Similarly, if Treasury rates rise, by tradition the lenders may not demand a higher coupon.

The contract design and distribution stages typically require one to two months. The process of obtaining a rating is the most important source of delays.[123]

The penultimate stage, due diligence by lenders, begins when a deal is fully subscribed. Before circling, lenders carry out a significant amount of credit analysis, which often involves gathering some information not found in the offering memorandum. During the due diligence stage, lenders verify the information in the offering memorandum and, if satisfied, present the deal to investment committees for approval. Rarely do investment committees reject a deal for anything but unsatisfactory due diligence. Rejection after circling imposes large costs on other members of the lending syndicate and on agents and borrowers. Agents are less likely to bring deals to a lender with a history of such behavior, and other lenders are less willing to join it in syndicates. Rejections thus in the long run affect a lender's ability to invest in private placements on favorable terms.

122. As is described further below, initial term sheets vary greatly in the extent of their detail. Most commonly, a term sheet will initially include suggestions regarding covenants but no spread. Interested investors respond to an initial offer by returning the sheet with acceptable covenants circled, modifications noted, a spread they will accept, and the volume they will buy at that spread given that their modifications to other terms are included.

123. Given life insurance companies' recent aversion to below-investment-grade placements, delays associated with the rating process are especially likely for potential issuers near the borderline between an investment-grade and a below-investment-grade rating.

11. Major documents in private placement issuance

Document	Purpose
Offering memorandum	Describes the issuer. Similar to a prospectus, but the information it may contain is not restricted.
Term sheet	Lists terms of debt contract. Initially, the rate is often not included. This document is the focus of initial negotiations. Often bundled with the offering memorandum in a "book."
Securities purchase agreement	Details the representations, warranties, covenants, and other provisions establishing the legal relationship between the borrower and lender. A securities purchase agreement is entered into with each investor.
Securities	The notes or other instruments of indebtedness.
Placement agent agreement	Specifies the obligations of the issuer and the agent. May limit the actions the agent can take, for example, may rule out solicitation of certain classes of investor, such as individuals.
Closing opinions and miscellaneous closing documents	A variety of of documents setting out opinions of counsel and stipulations by the issuer are often required at closing.

SOURCE. Engros (1992)

In the final stage of private issuance, lawyers hammer out the language of the debt contract, which involves several documents besides the notes themselves (see table 11 for the major documents).[124] The lenders are represented by a bond counsel, which is by tradition chosen by the lead lender but paid by the borrower. The borrower is often represented by its own counsel and is usually assisted by the agent. Transactions can unravel at this point when interpretations of term sheets differ, but such unraveling is relatively rare. Although it varies, the time required for the final stage is usually a few weeks. Once all parties sign the contract (closing), funds can be disbursed to the borrower.

The remainder of this subsection describes and analyzes each of the stages in more detail.

Prospecting, Initial Advice, and Inter-Agent Competition

Commercial banks and investment banks obtain most of their private placement clients through contacts initiated by *relationship officers*, who are traditional bank loan officers, investment bankers responsible primarily for maintaining relationships with clients, and hybrids of the two. Relationship officers call on current or prospective clients of their organization, attempt to learn about the broad spectrum of client needs for capital and financial services, and in the process often help clients to recognize opportunities and incipient problems. These officers are also able to identify opportunities to sell specific products.

Relationship officers consult their private placement group when they recognize that a private placement may be an appropriate way for a client to raise funds. When several different borrowing strategies might serve a client's interests, some organizations arrange presentations to the client by different groups within the organization, for example, the private placement group and the loan syndication group.

The prospecting process sometimes departs from this description at some commercial banks where most customer contact is by traditional loan officers and where the loan officers' compensation is determined by success in originating loans. This type of compensation scheme may deter loan officers from recommending a private placement over a commercial loan. According to market participants, commercial banks are losing this weakness as they change their organizational structures and compensation schemes.

Agents may also obtain clients through requests by previous private placement clients for help with new transactions. Such requests are sometimes made directly to the agent group, as the client already knows them. Direct requests are also received from potential issuers who want competitive bids from different agents. Relatively few agenting jobs for first-time clients result from prospecting by the private placement group itself.

Agents compete for the right to assist particular private placements, with the degree of competition depending both on expected profits and on the extent to which a borrower seeks multiple bids. Some agents specialize in particular types of transactions, and thus their explicit costs and opportunity costs differ across transaction types, so a given borrower can be quoted a variety of fees. Competition exists also along dimensions other than fees, as borrowers must estimate both the likelihood that a given agent can successfully distribute the securities and the interest rate and other loan terms that the agent can obtain. Borrowers do not typically possess the information required to make such estimates with precision,

124. See Engros (1992) for a complete list of documents.

so they must rely, at least to some extent, on reputations and on the claims made by agents in sales presentations. Agents from an organization with which a borrower has a satisfactory, ongoing relationship thus have a significant advantage in competing for that borrower's private placement business.[125]

Value Added. A considerable amount of economic value is added by agents during the prospecting, advice, and competition stage of a transaction. Some borrowers know little or nothing about the private market and may not consider it as a source of funds unless it is suggested by a relationship officer. Even if they are somewhat informed, borrowers will usually not commit to bear the opportunity costs associated with a private market offering without first comparing the opportunities there with those in other markets. Such a comparison can be done only with reasonably current and complete information about the operation of the private market and the terms available there. The costs of gathering such information are much higher for the private placement market than for the bank loan and public debt markets, especially if the borrower has never issued a private placement. Either directly or through their organization's relationship officers, agents provide such information to potential borrowers as part of their marketing efforts and thus improve the efficiency of financial markets.

Economies of Scale and Scope. Although available data do not support precise measurement, the remarks of market participants imply that economies of scale and scope at the prospecting, advice, and inter-agent competition stage of transactions strongly influence the structure of the market for agent services. An agent organization need not be large, but it must bear the staff and overhead costs of near-continuous gathering of information about private market conditions and of maintaining relations with lenders. Thus, the number of relationship officers calling on clients likely to issue private placements must be sufficient to yield clients paying fees that at least cover costs. Although the organization as a whole is not absolutely required to be large, commercial banks and investment banks that serve many corporate clients of medium to large size are more likely to provide a large flow of private placement prospects to their agent groups. Such organizations can thus spread the overhead costs of information gathering over a broader base of revenues. In other words, scope economies may exist between agenting and providing other financial services to medium and large corporations. Commercial banks that focus mainly on small business lending, mortgage loans, or consumer lending will have difficulty making a profit on private placement agenting.

Indirect evidence of economies of scope can be seen in the rankings of the thirty major agents according to their volume of commercial banking and investment banking business (table 10). Bank holding companies were ranked by the total consolidated volume of commercial and industrial loans on their books at the end of 1991.[126] Investment banks were ranked according to the total volume of domestic securities issues of all kinds for which they acted as lead manager.[127] As with the ranking of agents, we claim not that the order of rankings is entirely accurate or important but only that a significant ranking indicates a large volume of activity in the capital markets.

The top twenty-six agents rank among the top twenty commercial banks or the top fifteen investment banks, or both. All of the top fifteen investment banks are major agents, as are all of the top five commercial banks. Fifteen of the top twenty commercial banks reportedly acted as agent at least once. This predominance of large commercial and investment banks in the agenting industry is consistent with the existence of significant economies of scale and scope in agenting.[128]

The economies of scale and scope realized at the prospecting, advice, and competition stage influence an agent's strategy and specialization. An agent within a commercial or investment bank that serves mainly Fortune 500 and large international corporations will naturally find most of its clients coming from those groups. As is discussed further below, design and distribution of the

125. Occasionally a private placement will involve more than one agent. Sometimes a small agent with a client wanting a relatively complicated placement will bring in another agent having the necessary expertise. Sometimes a client will ask that two or more agents work together.

126. Commercial and industrial (C&I) loan volume was chosen as a ranking criterion because, among all groups of bank clients, C&I loan customers appear most likely to issue private placements. Data for the rankings were drawn from the December 31, 1991, Y-9 reporting form filed by bank holding companies.

127. Rankings were taken from reports in *Corporate Financing Week* and the *Investment Dealers Digest*.

128. The top twenty-six agents advised 94 percent of the volume of transactions recorded in the IDD database.

private issues of such borrowers is typically different from that for middle-market borrowers, and it is efficient for the agent to gather somewhat different information and to maintain somewhat different relationships with lenders than an agent specializing in serving middle-market borrowers.

Design of Major Contract Terms and Distribution of Securities

Having won an issuer's business, an agent begins designing and perhaps distributing the securities.[129] Design involves setting the terms of the securities, including payment amounts, timing, and covenants. Distribution involves finding lenders that will buy the securities. In contrast to the phases of public issuance, the line between the design and distribution phases is blurred and in some cases does not exist because design of the terms of privately placed securities often involves negotiations between lenders and borrowers. The negotiations may be implicit or explicit and may take place either before or during the period when the securities are offered to lenders. The nature and the timing of the negotiations depend to a large extent on the style of distribution chosen by the agent, which in turn depends on the identity of the agent, the characteristics of the borrower and the loan, and market conditions.

At one extreme, the process can resemble a best-efforts public underwriting. Here the agent uses its knowledge of market conditions and lenders' preferences to design terms that are likely to satisfy lenders, including an interest rate spread. The securities are then offered to many potential investors on a take-it-or-leave-it basis. If the issue cannot be fully sold, the interest rate may be increased or other terms may be changed. There is often no lead lender in the usual sense, although one lender may be designated as lead.

At the other extreme, the agent may contact one or a few potential lenders immediately upon receiving a mandate from the issuer and inform them of the identity of the borrower and the likely amount of the loan. Reactions of the lenders and ensuing negotiations influence the terms of the securities. By the time the term sheet is finalized, distribution may be pro forma because all or almost all of the lenders may have made informal commitments. Any unsold portion is made available to investors at large, although they have no opportunity to negotiate the terms.

Between these extremes is a continuum of styles. One part of the design phase, however, does not vary much across styles: due diligence.

Due Diligence. Agents of traditional private placements do not bear the market price risks associated with public underwriting, as non-underwritten placements never appear on agents' books. Agents are nevertheless at risk, in three ways. First, they are paid only for successful placements, and thus their investment in a particular transaction of staff time and other resources is at risk until closing. Deals can unravel for many reasons; one is a lender's discovery after circling but before formal commitment that the offering memorandum misrepresented the borrower's circumstances.

Second, the agent's reputation with lenders is at risk. Lenders also invest time and resources in evaluating potential loans, and the semiformal loan commitment that circling a deal represents is based mainly on the information in the offering memorandum and term sheet. If in performing its own due diligence a lender finds an offer memo to be materially incomplete or inaccurate, it will be less likely in the future to expend resources in considering transactions proposed by that agent. Also, if an agent is associated with too many placements that later decline in credit quality or go into default, lenders will be less likely to deal with that agent.

Third, private placement agents have been named as parties in some lender-liability lawsuits. Agents must thus take the potential costs associated with such suits into account when estimating the profits from assisting a transaction.

Agents control these risks by conducting a close examination of a borrower's business, financial position, and plans. They perform this due diligence immediately after they receive a mandate to assist a borrower's placement and, to some extent, before that. This examination resembles the due diligence performed by lenders and usually includes a visit to the borrower's headquarters or other relevant sites. Besides controlling risks, the examination provides the agent with information needed to write the offer memo and term sheet.

Some commercial banks and investment banks are sufficiently concerned about these risks that private placement agenting jobs must be approved by a credit committee. Some market participants

129. Winning an issuer's business is known as getting a mandate; it involves a contract between the issuer and agent known as a placement agent agreement.

stated that their committees reject a substantial fraction of agenting jobs.

Value Added from Due Diligence by Agents. Two ways in which agents add value are by pre-screening borrowers and by gathering information needed by potential lenders. Each of the large private market lenders is offered hundreds of placements in a typical year and refuses all but a small fraction.[130] At the typical large lender, an initial evaluation occurs when the agent offers the transaction. This evaluation is based mainly upon information in the offering memorandum and term sheet. Some proposed transactions can be quickly rejected, because they fail to meet the investor's credit criteria, its yield objective, or its diversification requirements. Others require more extensive evaluation, but this is still based on information in the offering memorandum and any additional information communicated during negotiations. Lenders typically perform their own due diligence to verify the information in the offering memorandum only after circling a deal.

The typical placement is offered to many potential lenders. The process would be inefficient if each of them gathered all the information required either to reject or to circle a deal and if each had to weed out obviously unqualified borrowers. In such a situation, the aggregate staff costs associated with private placement lending would be much larger.

Agents improve the efficiency of the intermediation process by performing these two functions. To do so, they must perform due diligence similar to that done by lenders during the verification stage. As noted, such examinations of borrowers begin during the prospecting, advice, and interagent competition stages.[131] At this point, many potential borrowers that are not actually able to issue are weeded out on the basis of a modest amount of information-gathering and effort by the agent. Resources are saved because only one organization processes and rejects the "applications" of such borrowers and because only one organization gathers the information that appears in the offering memorandum.[132]

This division of labor works because agents that do not perform adequate due diligence will quickly acquire a bad reputation.[133] Lenders do not actually commit funds based only on an agent's due diligence, but they are willing to incur the costs of initial evaluations. If they later find that the agent did not conduct a thorough evaluation or misrepresented the facts, they can prevent further losses by backing out of the deal. In the relatively small community of private placement professionals, the agent's reputation will be tarnished, not only with that lender but with other lenders as well. The agent will then be at a competitive disadvantage, as lenders will be less willing to consider placements offered by it in the future. Thus, the incentives of agents (with regard to due diligence) are kept closely enough in line with those of lenders that the efficiencies of having agents perform much of the pre-screening can be captured.

Determinants of the Style of Design and Distribution. The terms of a private placement are determined mainly by market conditions and the risks associated with lending to the borrower. Securities issued by risky or information-problematic borrowers must include more covenants or a higher rate of interest or both. However, the process by which the terms are determined may influence the nature of the terms and the costs associated with issuance. The process includes the negotiating strategies adopted by the issuer and agent and the way in which lenders are identified.

For example, an agent may be uncertain whether or not lenders will insist on a covenant restricting a borrower's interest coverage ratio. If the agent makes preliminary inquiries, the lenders will know that such a covenant is negotiable and will be more likely to insist on it. The agent may offer securities without the covenant to lenders sequentially, hoping to find some that make counteroffers not including the covenant.[134] But a sequential offering runs the risk that some lenders that would enter negotiations if they saw the covenant on the term sheet will reject the deal entirely. Returning to such lenders after completing the sequence is difficult. Also, sequential negotiations can be time-consuming and costly,

130. Many market participants spoke of rejection rates of 80 or 90 percent.

131. Depending on the agent and the nature of competition among agents for a borrower's business, the prescreening evaluation may be done before the agent receives a mandate from the borrower.

132. More than one agent may have to weed out an unqualified potential issuer if it approaches several agents.

133. However, the factual accuracy of the offering memorandum is technically the responsibility of the issuer, not the agent.

134. A sequential offering may involve sending a book, with a request for counteroffers, to half a dozen lenders and then to additional lenders as needed.

and in a long-run equilibrium agents' fees must reflect costs. Thus, competitive pressures often militate against sequential offerings. Instead, the agent may offer securities to many lenders simultaneously, on a first-come, first-served basis. If the issue is not fully subscribed, terms can be changed in response to lenders' counteroffers and another offering made. However, a simultaneous offering can be more expensive than a sequential offering that is quickly subscribed, as more lenders are involved. Also, for placements that require a lead lender, a simultaneous offering to the universe of lenders may be infeasible because smaller lenders will not consider some deals until a lead lender has circled.

In cooperation with the borrower, an agent makes decisions on four matters in determining the style of a distribution:

1. The terms included in the initial term sheet
2. The extent to which the initial terms will be represented as non-negotiable
3. Whether to seek a lead lender as the first step in distribution
4. The manner of solicitation of lenders (sequential or simultaneous) and the number and identity of those solicited.

Decisions are aimed at obtaining good terms while limiting the agent's costs of design and distribution.[135] At the outset, the agent commits to assist the issuer for a fee equal to a fixed percentage of the loan, and thus the agent's profits are directly related to its costs. Agents usually avoid high-risk strategies because they collect fees only for successful distributions. They also consider the effects of a strategy on their reputations and relationships with lenders. Negotiating strategies that annoy lenders may hamper an agent's ability to do business in the future.

In this context, several factors appear to be the primary determinants of the decisions that are made. One is the complexity or severity of the information problems posed by the borrower's business, financial structure, and corporate structure and by the complexity of the financing in progress. Complexities force potential lenders to invest more resources in credit analysis and, in some cases, not all lenders will have the necessary expertise. There is an incentive to find a lead lender for such placements, as the agent can use the lead's commitment as a signal to other investors that necessary analyses have been done and that the terms are satisfactory. There is also an incentive to offer the placement initially to only one or to a few potential lead lenders, as they will be more likely to invest in the necessary analysis if they know that competition to buy the placement will be limited until the terms are set.[136]

A second factor is the rating of the borrower and any prospective changes in its condition. Because default risk varies much more across B-rated borrowers than across A-rated borrowers, lenders must do much more analysis of lower-rated borrowers before they can negotiate terms. Here, again, an incentive exists to find a lead lender and to negotiate initially with only a few potential leads. Lenders, being also more reluctant to lend to borrowers that appear to be headed downhill, insist on more stringent covenants to control risk. They will be more likely to enter negotiations if the initial term sheet includes a strong covenant package, as it is a signal that the borrower recognizes the problem and will not impose unusually large negotiating costs on the lender over the term of the loan.

The distribution facilities available to the agent are a third factor affecting distribution strategy. When a financing is highly rated and straightforward, requiring relatively little analysis by lenders, a lead lender may be unnecessary, and offering the placement simultaneously to the universe of buyers of private placements may be possible. Some large investment banks use their fixed-income sales forces to make such offers. Because these sales forces already bear the fixed costs of staying in communication with a large group of buyers, this method can be cheaper to implement than distributions made solely by the less specialized members of the private placement group. Thus, other things being equal, agents with such distribution channels at their disposal are more likely to offer a placement simultaneously to many buyers.

A widespread distribution may not always be feasible. Besides the reasons already given, if a borrower wants to maintain confidentiality about

135. Here terms include not only coupon rate and covenants but also in some cases confidentiality, as some borrowers want to issue quietly, or the establishment of a relationship with particular lenders.

136. In equilibrium, lead lenders must be compensated for the costs of analysis of complex placements, and this compensation must be in the form of more favorable terms. Lenders relying on the lead's signal will have fewer costs of analysis, and thus they can earn excess returns and should be eager to buy such placements. However, the follow-on lenders must be compensated for the risk that the lead lender did not conduct a good analysis.

the transaction, the offering is likely to be shown to a limited number of lenders. Lenders can extract a premium from such borrowers, of course, as breaking off negotiations and turning to another potential lender are costly to the borrower. An inexperienced or uninformed agent is more likely to offer a placement to a few lenders at a time and solicit counteroffers from them than to offer to several lenders on a take-it-or-leave-it basis. Such an agent may lack the knowledge required to choose an optimal set of terms and may also have relationships with only a few lenders. A distribution may also be limited if a borrower wishes to establish a relationship with a particular set of investors. Finally, although in principle a broad distribution by a fixed-income sales force may be done quickly for some standard placements, in cases where rapid progress on negotiations and approvals is required the number of lenders often must be small.

Market conditions, too, may influence distribution strategies. When demand is high for placements in general or for particular kinds of placements, agents are more likely to write initial term sheets with fewer and looser covenants and to suggest rates slightly below market.[137]

This framework is a basis for describing the spectrum of placement design and distribution styles already mentioned. Agents are most likely to choose a style similar to a best-efforts public underwriting (involving an offering to many lenders on a take-it-or-leave-it basis) when the placement has a fairly high rating and standard terms, when the issuer is relatively well known and has no unusual corporate or financial structure, when the issuer does not insist on confidentiality or unusual speed, and when the agent has the means to distribute broadly at low cost.[138]

The style at the other end of the spectrum, negotiating terms with one or a few lenders, is most likely for placements that are highly complex or that require confidentiality, speed, or that are motivated in part by the borrower's desire to establish a relationship.

A common hybrid style involves initial negotiations with one or a few potential lead lenders, followed by an offering to many lenders once a lead has been obtained. This style is most common for placements with some complexity, so that the signal provided by the lead's commitment is important, but in which the borrower does not insist on confidentiality nor on speed.

In general, the choice of design and distribution style is the outcome of the complex decision problem previously described. Styles vary widely because the circumstances surrounding individual private placements vary widely. The examples given here hint at, but do not fully capture, the diversity of styles.

Value Added by Agents' Design and Distribution. Agents are used primarily because they have the knowledge, expertise, and organization to place securities on terms more favorable (even after subtracting their fees) than the borrower itself could obtain. Some borrowers acting alone might locate willing lenders at only moderate cost, but they could be at a disadvantage in negotiations because the lenders might assume that, should negotiations break down, the borrower would find locating additional lenders costly. Agents' activities increase the efficiency of capital markets because, in effect, they heighten competition among lenders and reduce the total costs of borrowing.

Strategic Implications of Distribution Methods for Agents. As we have argued, some agents may specialize in serving certain kinds of private placement clients (for example, middle-market companies) because their organizations' relationship officers, the primary source of clients, specialize in serving those clients. To some extent, agents also specialize in styles of distribution. Such specialization both influences and is influenced by specialization in types of clients.

All private placement agents can perform the standard varieties of design and distribution, in which they send offer memos and term sheets to some number of potential lenders and then negotiate with those lenders. One avenue of specialization involves the identity of the lenders an agent ordinarily deals with. Because large insurance companies often find focusing their limited staff time on large or complex placements more profitable, agents that advise on mainly smaller issues may find maintaining close relationships with midsized and smaller lenders more profitable. Conversely, agents that tend to advise on large and complex placements may deal mainly with the largest life insurance companies. A sophisticated borrower surveying the field of

137. During the past two or three years, insurance companies have shifted funds from commercial mortgages and below-investment-grade securities toward investment-grade securities. Market participants indicated that this shift has resulted in tighter spreads and more flexible covenants for investment-grade placements.

138. Agents' fees as a percentage of the offering are, on average, smallest for this variety of placement.

agents may find it most advantageous to choose one that frequently deals with appropriate lenders.

A more recent variety of specialization involves the use of public bond sales forces to offer private placements on a take-it-or-leave-it basis to a large number of potential buyers. At present, only a few agents use this method and only for some of the placements on which they work. The relationship officers of these agents provide a steady stream of clients issuing the kind of highly rated, relatively standard placements that are most amenable to distribution on a take-it-or-leave-it basis. According to market participants, such agents apparently are mainly large investment banks. Few, if any, commercial banks appear to use the method at this time.[139]

Economies of scope between agenting and public debt underwriting do not appear to be enormous. All of the top ten private debt agents listed in table 10 are either investment banks or commercial banks with agents located in securities subsidiaries with debt underwriting powers. However, five of the agents ranked in the next tier of ten had either no securities subsidiary or one with limited powers. Thus, an organization can have a substantial agenting business without also being able to act as underwriter.

Lender Due Diligence and Contract Writing

After enough lenders have circled a deal to make it fully subscribed, the final phases of the private issuance process begin. First, lenders that circled verify the information on which they based their commitments. Large lenders conduct relatively extensive investigations that include trips to the borrower's facility (small lenders may again rely on the lead). If the investigations are satisfactory, formal letters of commitment to lend are dispatched. If lenders find material omissions or misrepresentations, either the deal falls apart or negotiations are reopened.

Following formal commitments, by convention the lead lender nominates a bond counsel to act as the lenders' representative in negotiating the detailed language of the debt contract. The bond counsel is paid by the borrower, which retains its own counsel to assist in negotiations. The agent often also assists in negotiations.

Closing or settlement concludes the process of issuance. The documents are signed, and funds are disbursed to the borrower and the agent.

Information Flows

The private placement market is rife with information problems. As noted in part 1, the risks of lending to private market borrowers are often hard to observe and to control because relatively little public information may be available about them and because their businesses, corporate structures, or financings may be complex.

The lack of publicly available, timely information about the terms of private debt, including prices and other market conditions, is another information problem. Such information is valuable, and the collection, processing, and sale of it to borrowers is the primary business of agents. Lenders, however, also need such information, and agents are involved in transmission of information to them as well.

How Agents Gather Market Information

Agents can learn about current market conditions in four major ways: by observing deals in which they participate, by asking lenders, by asking other agents, and by subscribing to newsletters and other information clearinghouses.

Observation of deals in which an agent participates is most reliable, as the agent sees all offers and counteroffers and knows all details of the initial and final terms of the debt contract. However, a large flow of deals with a variety of credit ratings and levels of complexity is required to support a constant reading of current prices and terms for the spectrum of private placement contracts. According to indications from market participants, even agents with very large volumes of business rely on multiple sources of information, not just on their own deals.

Agents also ask lenders about the terms of deals in progress and about completed deals. Such inquiries are perhaps the primary way that small agents keep up with market conditions. Lenders have mixed incentives to share information. On the one hand, judicious limits on the flow of information to agents may give lenders an advantage in negotiations. On the other hand, lenders also want information from agents and thus will enter into informal sharing arrangements with them. Lenders also cultivate agents, especially

139. Only a few commercial banks possess securities subsidiaries (section 20 subsidiaries) with full debt-underwriting powers, and thus only they among banks would possess public security sales forces.

those doing a large volume of business, because they want to be offered securities and to be placed at the beginning of the queue in sequential distributions.[140] Lenders can reward agents by responding promptly to offers, by not imposing nuisance costs while deals are in progress, and by sharing information. Because they have the most to gain by cultivating large agents, which have both the largest flow of deals to offer and the best information, lenders are most likely to share information with them. Apparently, agents seldom share information with one another, perhaps because they are in competition.

In recent years, several newsletters and other publicly available sources of information about private market deals have appeared. None offers a complete picture of the market, and some offer information that is slightly dated. However, market participants indicated that they do gather information from these sources and find it useful. The newsletters themselves gather information by asking lenders and agents (and sometimes borrowers) about deals recently completed and those in progress.

Interestingly, some lenders reportedly seldom share information with the newsletters. This situation is consistent with their incentives to share information only with agents from which they expect favors in return. Agents also have incentives to limit information flows, but these are not so strong as the incentives of lenders. At the margin, the interest of agents may be to increase the efficiency of the private market, as improvements in terms available to borrowers (due to improved information flows) may increase the flow of deals. However, large agents may lose some of their informational advantage from such an improvement in efficiency.

How Lenders Gather Information

Lenders' sources of information are similar to those of agents, but lenders have an advantage in that they observe not only the terms of debt contracts that they buy but also at least the initial terms of all contracts they are offered. Many of the larger private market lenders we interviewed stated that they are offered many more than 500 deals in a typical year but that they purchase only a small percentage of them. They could reduce their prescreening costs by specifying more precisely to agents the kinds of deals they will buy; however, doing so would reduce the size of their window on current market conditions. Several market participants mentioned that private market lenders actively lobby agents to offer them every deal and are unhappy with agents that fail to do so.[141]

Lenders also gather information from agents, typically by inquiring about the final terms of deals they were offered but did not participate in. They may also make such inquiries of other lenders, though the sense of market participants' comments was that these inquiries are less frequent. Newsletters do not appear to be a primary source of information about market conditions.

Economies of Scale

Besides being able to spread fixed costs of performing agent operations over a larger volume of business, large agents (and large lenders) have an advantage in gathering the information required to operate in the private placement market. Not only are they able to glean more information directly from deals they participate in, but they have more to trade when making inquiries of other lenders and agents. Such economies of scale may translate into larger profits. They may also act as a barrier to entry of new agents, as such agents will typically have neither large deal flows nor information to trade. The effect on the profit differential between large and small lenders may be less significant, because large lenders tend to be lead lenders and small lenders can free-ride by buying pieces of the deals the large lenders commit to buy.

Since data on the costs and profitability of agents are not available, quantitative evidence of economies of scale and on the competitiveness of the agent market is limited. However, economies of scale often foster concentration of an industry, and the agenting industry is somewhat concentrated. In 1991, the top five agents of debt had 41 percent of the market by volume, the top ten had 65 percent, and the top twenty had 89 percent. Of course, as discussed earlier, such concentration

140. One market participant's revealing comment was that, at general social events, the private placement market lenders, not the agents, pay the tab. By contrast, in the public market, the underwriters, not the investors, pay the tab.

141. Some lenders do implicitly specify broad parameters for deals they want to see. For example, a few lenders are well known to buy only investment-grade placements, and thus they are less interested in conditions in the below-investment-grade segment of the private market.

could result from a combination of economies of scope and concentration in the markets for other financial services.

Price Determination

As noted previously, the prices of private market securities are determined primarily by negotiation. In the case of securities distributed on a non-negotiable basis by fixed-income (public bond) sales forces, the negotiations are implicit in that the agent uses information about market conditions to set a price. This section briefly discusses the mechanics of price determination and the methods that agents and lenders use to set initial and reservation prices.

In most cases, term sheets for private offerings do not include a price or a rate spread over Treasury securities of comparable maturity.[142] When they send a term sheet, agents often orally suggest a price range to potential lenders. Lenders that circle the deal will circle the terms they accept on the term sheet, suggest alternatives for those they do not accept, and state a rate spread and a quantity they will purchase at that spread. The spread and terms may then become the subject of negotiations, or the agent may simply reject or accept the counteroffer. The agent collects counteroffers (the circles) and negotiates until it and the issuer decide that the deal is fully subscribed, at which point investors are notified whether they are in or out of the deal and a coupon rate is set (based on that day's Treasury yield curve and the largest spread among the counteroffers to be accepted). Lenders are thus exposed to a form of interest rate risk during the period between notification of acceptance of their circle and closing. If they hedge risks associated with a circled deal and the deal falls through, they are left with the risk associated with the hedge. Clearly lenders will sometimes have an incentive to back out of a deal during the period between circling and commitment (if interest rates rise), but conventions in the market discourage this action. In general, lenders can pull out of a circled deal without damage to their reputations only if they discover discrepancies when performing their own due diligence.

Agents determine initial prices by various methods. An obvious method is to use spreads for recently issued private placements of comparable risk and maturity. However, partly because private placements are often tailored contracts, the private market is thin enough for some risk levels and maturities so that there may be no comparable recently issued privates. Thus, agents often look for comparable publicly issued corporate debt (especially in investment-grade deals), marking up spreads by their estimate of the public–private differential. Participants' estimates of the average differential are in the range of 10 to 40 basis points for investment-grade securities.[143] A few agents use formal pricing models in their exercises, but comments made in interviews suggest that these are generally used as supplements rather than as primary determinants of prices.

Lenders conduct similar exercises to determine market prices but also must determine reservation prices. At some insurance companies, this determination is effectively done by portfolio managers in a part of the organization separate from that responsible for buying privates. In some cases, portfolio managers mainly compare the returns available from different classes of investments, taking diversification into account. In other cases, they compute required levels of risk-adjusted return on equity and then specify some form of demand schedule to the private placement group. A demand schedule may be as simple as a target volume of private placement purchases in each risk class for a given year, at the best available market prices, or as complicated as explicit required rate of return on equity with quantity constraints attached.

Agents' Fees and Other Costs of Issuance

Issuers generally agree in advance to pay the agent a fixed percentage of the face amount of an issue at closing. The fee is thus contingent on successful issuance.

We have little quantitative evidence about fees. Market participants agreed that fees vary with the quality and complexity of a financing. Low-rated or complex deals require more analysis and are more difficult to distribute and shepherd through the lender due diligence and final negotiation stages. Also, percentages vary inversely with deal

142. This statement is true for most offerings of traditional private placements. In some cases in which a placement is simultaneously offered to the universe of potential lenders by an agent's fixed-income sales force, a spread is specified, and investors take it or leave it.

143. The differential for underwritten Rule 144A private placements is smaller, perhaps 5 to 15 basis points at this time.

size. Agents' costs have a large fixed component that is independent of deal size, and thus agents must earn a larger percentage of small deals.

For a $100 million straightforward A-rated private issue, market participants gave fee estimates that ranged from 3/8 to 5/8 percentage point, with the most common answer being 50 basis points. Estimates ranged widely for complex or small issues, up to several percentage points. Many participants stated that fees have fallen slightly in recent years.

Issuers bear other fixed costs of issuance. Besides the opportunity costs of cooperating with due diligence by agents and lenders, issuers must pay the lenders' bond counsel and typically must also retain their own counsel and pay other miscellaneous costs associated with negotiations. Market participants' estimates of these costs varied widely, but for straightforward issues were often between $50,000 and $125,000, or 5 to 13 basis points for a $100 million issue.

Private Market Efficiency

In considering the efficiency of the private placement market, we focus on whether lenders or agents earn either subnormal or supranormal profits. Quantitative data on which precise judgments might be based are not available, but the comments of market participants suggest that the market is relatively efficient.

With regard to lenders' profits, one major insurance company stated recently in a public forum that interest rates on its private originations during 1989–91 were, on average, 31 basis points higher than rates on comparable public issues and that 18 basis points of this differential were spent on costs of origination and monitoring. These numbers leave 13 basis points for profit and for compensation for the reduced liquidity of private placements relative to that of publicly issued bonds. Another major company displayed proprietary data during interviews indicating that recent historical net loss rates due to defaults on private placements have been similar to loss rates on comparably rated public issues.

Presuming that these data are accurate and reasonably typical of private market lenders' experience, and assuming that lenders do not make subnormal or supranormal profits on their public bond market activities, the data place rough boundaries on the degree of private market inefficiency that may exist. The key question is the size of the differential required to compensate lenders for the relative illiquidity of private placements. If this differential is near zero, then private lenders may be making modest excess profits.[144] If the differential is near 13 basis points, then lenders are taking a modest loss at the margin. Regardless, the dollar sums involved apparently cannot be large enough to represent extraordinary inefficiencies that would be a major concern to policymakers.

Agents' profits are even harder to estimate, as no information is available about their costs. Based on market participants' remarks about fees and staff sizes and on publicly available information about the volume of issues assisted by particular agents, the largest agents may be earning substantial marginal profits on the staff and overhead costs of their private placement groups alone. However, portions of these profits must be attributed to the actions of relationship officers and other divisions of commercial banks and investment banks, so actual profit rates may not be unusual.

Smaller agents may also be able to make profits if their flow of business is reasonably steady. As noted, smaller agents will find maintaining their knowledge of market conditions more expensive and difficult, and they will face minimum fixed costs of maintaining a staff.

We have no reason to think that agents make large excess profits, and many market participants remarked on the substantial competition that exists. On the whole, the private placement market appears to be reasonably efficient, although it may not always react quickly to changes in conditions.

Private Placements without an Agent

Data are not available on the volume of private placements issued without an agent's assistance, but it is probably substantial. Estimates by major private market lenders suggest that as much as one-third of total private issuance is done without an agent. In most cases, such issues are sold by a company that has previously borrowed in the private market and sold to investors that bought parts of the previous placements.

144. Computing profit rates is difficult because the capital at risk is hard to identify. If at the margin the only capital at risk is the staff and overhead costs of origination and monitoring, lenders' marginal rate of return on equity in private market operations may be as high as 70 percent. But that estimate is almost surely far too high because private market lending is, on the whole, probably riskier than buying public bonds, so more equity must be allocated to such lending than to public bond market lending.

In such cases, some of the services that agents provide are not relevant. For example, due diligence by the agent adds little or no value, as monitoring by the lenders since the previous issuance has kept them informed about the borrower. Locating appropriate potential lenders is also virtually costless for the borrower. Apparently the other services provided by the agent—notably, help in negotiating terms—are thought by some issuers not to be worth the fee. Many repeat borrowers do use an agent, however, so either circumstances or opinions differ across repeat borrowers.

Agent Operations under Rule 144A

As noted in part 2, section 1, the market for many new private issues made under Rule 144A operates much more like the market for new public issues than like the traditional private placement market. Some securities involved in transactions exempt from registration under Rule 144A have been distributed by agents in the fashion described above. Others, especially those of well-known U.S. or foreign companies, have been formally underwritten.

Agent prospecting, advice, competition, and due diligence are much the same for both underwritten and traditional privates, but the distribution of underwritten securities is usually similar to that seen in the public market. Underwritten securities are often sold to typical buyers of public issues. For example, many life insurance companies buy such issues through their public bond investment groups, not through their private placement investment groups.

When there is no firm-commitment underwriting, some Rule 144A offerings are made on a take-it-or-leave-it basis by the agent organization's fixed-income sales force. Thus, Rule 144A placement distributions are often at the public-like end of the spectrum of private market distribution styles. Agents that are proficient at this style of distribution have a distinct competitive advantage in assisting Rule 144A placements.

Summary

Agents are a key part of the market for privately placed debt. They gather, process, and sell information that would be prohibitively expensive for many issuers themselves to collect. They help enforce norms of behavior for borrowers and lenders that make the private market function more efficiently.

Agenting appears to be associated with economies of scale and scope that confer a distinct advantage on the large commercial banks and investment banks that specialize in serving the corporate finance needs of middle-market and large companies. Economies of scope of agenting apparently occur with other corporate finance service activities, in that bank and investment bank relationship officers can provide a stream of clients to agents while selling other products. Economies of scale arise from fixed costs of maintaining a staff of agents and from the information sources in the private market, which are such that costs of collecting information fall as the volume of an agent's business rises.

That agenting appears to be a competitive business with low barriers to entry implies that the profits available to new or small agents are not large. Slow trends of falling information costs and increasing information flows will likely increase competition among agents even more and will improve the efficiency of the private placement market as a whole.

Part 3: Special Topics

Part 3 focuses on two special topics. One is a recent credit crunch that cut off the access of most below-investment-grade companies to the private placement market. The second is the current and prospective role of commercial banks in the private placement market.

Credit crunches have long been an interesting and controversial topic, partly because producing compelling evidence that a crunch occurred is often difficult. For the recent private placement credit crunch, relatively extensive evidence is available. The causes of the crunch are intertwined with the intermediated and information-intensive nature of the private market and are somewhat different from the mechanisms said to be responsible for a possible concurrent crunch in the bank loan market. The story of the private placement credit crunch sheds additional light on the economics of the private market and of financial intermediation.

The role of banks in the capital markets has changed substantially during the past twenty years: The rise of the commercial paper market and other markets is associated with a decline in the share of bank loans in all debt financings. As the bank loan and the private placement market are information-intensive and as medium-sized companies are responsible for a large share of borrowings in both markets, the two markets may be in competition, and one may come to dominate. However, we find the latter possibility unlikely. Because the focus of banks on relatively short-term lending appears to result from the maturity of their liabilities, they probably will not eclipse the private market as a source of long-term loans to information-problematic borrowers unless the structure of their liabilities changes in a major way. Repeal of the laws governing the separation of banking and other forms of commerce seems to be only a first step in such a change. For similar reasons, traditional buyers of private placements appear unlikely to become major short-term lenders. Finally, neither commercial banks nor investment banks seem to possess a competitive advantage that would allow them to dominate the market for private placement agent services.

1. The Recent Credit Crunch in the Private Placement Market

Since the middle of 1990, issuers of below-investment-grade securities have encountered a sharp contraction in the availability of credit in the private placement market. A sharp rise in interest rate spreads on these securities indicates that the reduction in supply has been larger than any decline in credit demand associated with the weak economy. This credit crunch has resulted mainly from a greater reluctance of life insurance companies to assume below-investment-grade credit risk. This reluctance is due mostly to concerns that high balance sheet proportions of such investments could lead to a runoff (or even a run) of liabilities and threaten the profitability and, perhaps, even the survival of insurance companies. Asset quality problems at many life insurance companies, regulatory changes, and runs at a few insurance companies have contributed to the reluctance of insurance companies to buy below-investment-grade private placements.

The reduced availability of credit from life insurance companies has likely adversely affected the ability of below-investment-grade companies to obtain financing. Few alternative lenders have entered or expanded their presence in the below-investment-grade sector of the private market to fill the void. The reason appears to center on the high start-up costs that potential lenders must incur to enter the private market. Also, the number of alternatives to private placements is limited. Although they may be the main practical alternative, bank loans are far from perfect substitutes, and some firms shut out of the private market may have found banks to be reluctant lenders.

Definition of *Credit Crunch*

Many definitions of the term *credit crunch* have appeared in the literature.[145] In our view, a credit crunch occurs when, for a given price of credit, lenders substantially reduce the volume of credit provided to a group of borrowers whose risk is essentially unchanged. That is, a credit crunch is caused by a reduction in lenders' willingness to make risky investments or by a "flight to quality" by lenders. In terms of a standard supply and demand diagram, a credit crunch is a substantial decline in the volume of credit caused mainly by a leftward shift of the credit supply curve, when the

145. See Owens and Schreft (1992) for a review of definitions.

12. Gross issuance of private placements by nonfinancial corporations, 1989–92[1]

Billions of dollars except as noted

Type of issuance	1989	1990	1991	1992
Total issuance	54.7	49.9	42.9	29.5
Below-investment-grade	6.6	8.1	3.8	3.2
MEMO				
Ratio of below-investment-grade to total (percent)	12.1	16.2	8.9	10.8

1. Excludes restructuring-related issues in excess of $250 million and issues to finance employee stock ownership plans.

SOURCE. IDD Information Services.

shift is *not* due principally to an increase in the riskiness of borrowers. This definition is similar in spirit to that of Bernanke and Lown (1991), who define a crunch as "a significant leftward shift in the supply for bank loans, holding constant both the safe real interest rate and the quality of potential borrowers."

A contraction of supply alone does not necessarily imply a credit crunch, as credit availability may decrease and lending terms tighten because of an increase in the riskiness of borrowers. Thus our definition of a credit crunch does not include a reduction in supply that is a normal response to a recession or an economic slowdown. In such circumstances, the riskiness of borrowers normally increases, and lenders demand compensation either in higher interest rates or in tighter nonprice terms of loans. Although borrowers might characterize such a reduction in credit supply as a credit crunch, such a characterization would not be appropriate because the decrease in credit is a normal response of lenders to changing economic conditions. Cantor and Wenninger (1993) refer to this situation as a "credit slowdown."[146]

Our definition of credit crunch differs from some, notably that of Owens and Schreft (1992), in that it does not require that the reduction in credit be accomplished by nonprice rationing. The reduction may be effected entirely by an increase in the relative price of credit, as would normally occur in response to a leftward shift of a supply curve, or by some combination of price increase and nonprice rationing.

Evidence That a Credit Crunch Occurred

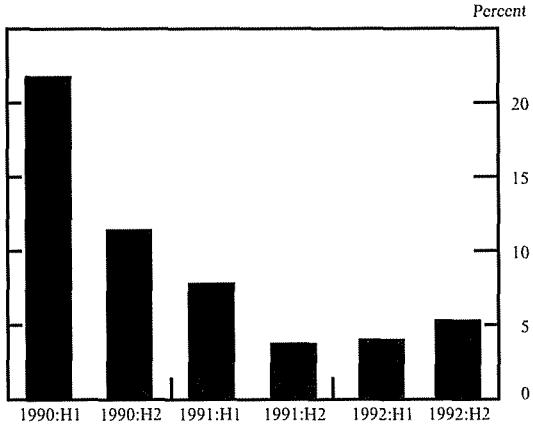
Recent events in the below-investment-grade segment of the private placement market qualify as a credit crunch because gross issuance or originations for below-investment-grade debt declined substantially and spreads on such debt increased sharply, whereas spreads on investment-grade private placements held steady or declined. A general increase in the riskiness of borrowers cannot account for these phenomena. The decline of issuance may have been accomplished partly by nonprice rationing, but we have no quantitative evidence to support such a claim, and market participants' remarks about nonprice rationing were mixed.

Data from three separate sources confirm a reduction in issuance of below-investment-grade private placements. First, gross issuance by below-investment-grade, nonfinancial corporations fell more than 50 percent in 1991, a much steeper drop than that seen in issuance by investment-grade corporations (table 12).[147] As a percentage of gross offerings, below-investment-grade issuance declined from 16 percent in 1990 to 9 percent in 1991. Data for 1992 indicate that issuance remained depressed, although the percentage was slightly above that in 1991. Second, although total commitments by major life insurance companies to purchase private placements remained roughly constant from early 1990 through mid-1992, the proportion of below-

146. Cantor and Wenninger's definition of credit slowdown would also include a reduction in credit due to a reduction in demand.

147. Estimates of issuance were constructed from data obtained from IDD Information Services. Gross issuance excludes offerings to finance employee stock ownership plans (ESOP) and restructurings. Underlying developments are more evident with their exclusion, as both were heavy in 1989 but fell off sharply in 1990 and 1991. Before 1990, ratings reflect the judgment of agents supplying information on transactions they placed. Thereafter, ratings assigned by the National Association of Insurance Commissioners are available.

16. New commitments to purchase below-investment-grade private placements as a percentage of total commitments by major life insurance companies, 1990–92



SOURCE. American Council of Life Insurance.

investment-grade issues dropped sharply in the middle of 1990, from 21 percent in the first half of 1990 to 11 percent in the second half of that year. Since then, the percentage has varied between 3½ percent and 7½ percent (chart 16).[148] Third, the reduced rate of gross purchases indicated by the survey is also evident in insurance companies' holdings of below-investment-grade securities. Holdings of such securities at all life insurers fell 11 percent in 1991, whereas holdings of investment-grade securities rose nearly 12 percent. As a result, speculative-grade private bonds as a percentage of all private placements in insurance company portfolios declined from 19.8 percent in 1990 to 16.7 percent in 1991. The low rate of commitments to purchase below-grade private placements in 1992 led to a further decline in their share to 15.3 percent last year.

Accompanying the decline in gross issuance and outstandings has been a sharp increase in yield spreads on below-investment-grade private placements. According to market reports, before 1990 the difference between yields on BB- and BBB-rated private placements with comparable terms was about 100 basis points; since then, the difference has been as high as 250 basis points.[149] Although data are unavailable for periods before 1990, the relative movement in yields on BB and BBB private bonds is confirmed in the spreads reported in the ACLI survey (charts 17 and 18).[150] During the first half of 1990, the spread between yields on BB private placements and comparable Treasury securities was about 300 basis points, compared with 190 basis points on BBB private placements. From that time, the spread on BB bonds moved up to almost 425 basis points in the second quarter of 1991, but more recently it has retreated to around 350 basis points. During the same period the BBB spread drifted down to 180 basis points. Similarly, the spread on A-rated private placements varied little over the past three years.[151]

The substantial increase in spreads over Treasuries for BB private placements cannot plausibly be attributed to a general increase in risk associated with the slowdown in economic activity because such an increase in risk should have also led to an increase in BBB spreads. In fact, those spreads declined. Similarly, although the slowdown might have caused issues to be more concentrated at the low-quality end of the risk range that each rating category spans, leading to an increase in average spreads for each rating category, such a mechanism should have affected both BB and BBB spreads. The data thus indicate that, within the below-investment-grade segment

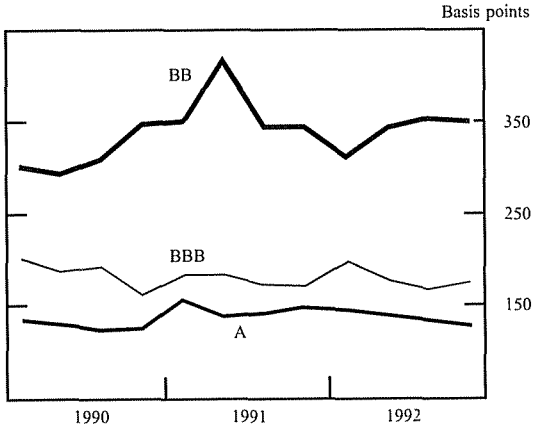
148. Commitment data are from a survey of major life insurance companies by the American Council of Life Insurance (ACLI). Respondents to the survey hold approximately two-thirds of all private placements in the general accounts of life insurance companies. The survey began in 1990, so earlier data are not available for comparison. However, at year-end 1990, the twenty largest life insurance companies reported that 20.1 percent of their private placements were below investment grade. Hence, the 21 percent share of private placement commitments going to below-investment-grade bonds in the first half of 1990 probably was similar to earlier rates of acquisition of such securities.

149. BBB-rated bonds are investment grade, whereas those rated BB are below investment grade.

150. Care must be used in interpreting the reported spreads. Although they are transaction prices, they do not reflect a standardized security. The nonprice terms of private placements can differ widely for bonds carrying the same credit rating, and the terms affect the yields. For example, at any given moment, the difference in spreads between the highest-risk BB issue and the lowest-risk BB issue may be as much as 150 basis points. Under normal circumstances, averaging spreads within a rating category produces a representative spread for that rating. However, as most of the BB bonds issued since mid-1990 probably were at the least risky end of the BB risk range, the increase in the BB spread shown in chart 17 probably understates the actual increase.

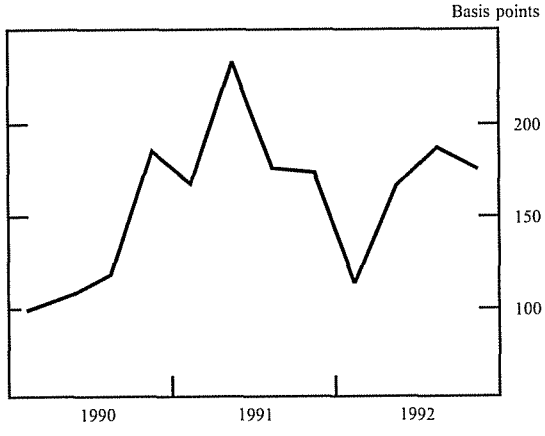
151. In the public high-yield bond market, spreads increased sharply from mid-1989 through 1990 but have since fallen significantly, though they remain above the levels that prevailed in early 1989. Issuance of public junk bonds stopped almost completely during 1990 and most of 1991 but surged in 1992 to the second highest level ever. Thus, experience in the public junk bond market has been significantly different from that in the market for below-grade private debt.

17. Yield spreads on privately placed corporate bonds, 1990–92[1]



1. Quarterly weighted averages.
SOURCE: American Council of Life Insurance.

18. Difference between BB spread and BBB spread, 1990–92[1]



1. See chart 17 for notes and source.

of the private placement market, for a given level of risk loan prices went up whereas the volume of loans went down. These facts support our assertion that a credit crunch occurred within that market segment.

Sources of the Credit Crunch

A credit crunch can occur for several reasons. It may result from actions taken by regulators that affect lenders' ability or incentive to assume certain risks. It may result also from internal developments at lending institutions, such as unexpectedly large loan losses, that cause portfolio rebalancings involving greater conservatism in lending. For lenders that are financial intermediaries, a credit crunch may result from liability holders' becoming concerned about the intermediaries' financial condition. The ability of intermediaries to raise funds to support their investment activity may be adversely affected in such circumstances and may lead to their adoption of more conservative investment strategies to restore public confidence. The latter mechanism appears to have been primarily responsible for the crunch in the private placement market. Problems of asset quality at life insurance companies, a change in regulatory reporting requirements, and runs on a few insurers combined to raise doubts about the solvency and liquidity of insurance companies and to focus the public's and the rating agencies' attention on the proportion of an insurer's assets invested in below-investment-grade securities as a signal of its solvency.

Publicity about high proportions of poorly performing commercial mortgages in insurance company portfolios was one event raising doubts among the public about the solvency of insurers. Commercial mortgages make up 25 percent of general account assets at the twenty largest insurance companies, which include most of the major participants in the private placement market. Additional exposure to commercial real estate risks comes from direct real estate investments, which at many life insurance companies consist primarily of real-estate-related limited partnerships. As the press has widely reported, delinquency and foreclosure rates on these commercial real estate investments have risen sharply over the past few years. These problems heightened public awareness of the financial problems of life insurance companies and thus added to the pressure on those with significant holdings of commercial real estate loans to shift out of all lower-quality assets. Also, since even sound commercial real estate loans turned out to be riskier than anticipated when they were made, life insurance companies shifted investments toward high-quality assets.

Publicity about losses on some publicly issued junk bonds also raised concerns about the quality of below-investment-grade securities in general, and a change in regulatory reporting requirements made insurance companies' holdings of such assets seem to have increased. In June 1990, the National Association of Insurance Commissioners (NAIC) introduced finer distinctions in its credit ratings of corporate bonds, including private placements. Under the old rating system, many

13. NAIC credit ratings

NAIC rating designation	Equivalent rating-agency designation
Old system[1]	
Yes	AAA to B
No*	BB, B
No**	CCC or lower
No	In or near default
New system[2]	
1	AAA to A
2	BBB
3	BB
4	B
5	CCC or lower
6	In or near deafult

1. The asterisks appended to the "No" ratings are part of the rating designation.
2. Effective December 31, 1990.
Source. Securities Valuation Office, National Association of Insurance Commissioners.

securities, especially public bonds, with credit quality equivalent to BB or B received an investment-grade rating. To correct this shortcoming, the NAIC adopted a system with categories more closely aligned with those in the public market (table 13). NAIC-1, the top rating, was given to securities rated AAA to A; NAIC-2 to BBB securities; NAIC-3 to BB securities; and NAIC-4 to B securities. Although insurers' actual holdings were probably little changed, the reclassification resulting from the new system caused insurers' reported holdings of below-investment-grade bonds, both private and public, to rise between 1989 and 1990 from 15 percent of total bond holdings to 21 percent. The level of reported holdings of high-yield bonds jumped more than 40 percent.

The sudden appearance of a much increased percentage of below-investment-grade securities on the balance sheets of life insurance companies focused the attention of policyholders and other holders of insurance company liabilities on the composition of insurers' bond holdings. As evidence of increased public sensitivity, a recent study by Fenn and Cole (forthcoming) found that stock prices of insurance companies with high concentrations of junk bonds were adversely affected in early 1990 by the publicity surrounding the financial problems of First Executive, whose insurance units subsequently failed because of losses on junk bonds. In contrast, stock prices of insurance companies with little exposure to junk bonds were not affected. The public's greater sensitivity to the quality of life insurance companies' assets discouraged many insurers from purchasing lower-quality private placements from fear of losing insurance business to competitors with lower proportions of below-investment-grade bonds in their portfolios.

That public fears regarding below-investment-grade private placements were warranted is not clear, as market participants report that loss rates on those securities have not been unusual. Loss rates on such securities may be expected to differ from those on similarly rated public junk bonds because private placements typically contain covenants or collateral and because only a few information-intensive lenders are involved; thus corrective actions are more timely, and workouts are less difficult. Because nonparticipants lack a clear understanding of the private market, however, the public has a tendency to equate below-investment-grade private placements with public junk bonds.

Another development pressuring insurance companies to restrict purchases of below-investment-grade private placements has been the concern of credit rating agencies about the lack of liquidity of private placements, especially those that are below investment grade. This concern appears to be a consequence of the July 1991 collapse of Mutual Benefit, which lacked the liquidity needed to meet heavy redemptions by policyholders. Driven by a fear of being downgraded, insurance companies have sought more liquidity in their bond portfolios by concentrating on higher-grade credits, which are more readily sold in the secondary market.[152]

Another regulatory move by the NAIC appears not to have been a significant cause of the crunch. This move involved changes in the mandatory securities valuation reserves (MSVR) held against bonds in life insurance company portfolios. For bonds that would have been rated investment grade under the old rating system, but fell to NAIC-3 or NAIC-4 under the new system, required reserves jumped from 2 percent of the bonds' statement values to 5 percent for NAIC-3 and 10 percent for NAIC-4.[153] Also, the time allowed to reach the mandatory reserve levels was

152. Some market participants reported an increase of secondary market sales of private placements by life insurance companies during 1991. The sales were done discreetly to avoid raising concerns and causing the price of the securities to fall, as they usually do after appearing on a bid list. Some market participants interpreted the increase in secondary market activity as an attempt by the sellers to increase the liquidity of their portfolios. Others interpreted it as an attempt to demonstrate the liquidity of private placements to the rating agencies.
153. Mandatory reserve levels for NAIC-1 bonds were reduced, while those for NAIC-2 bonds were unchanged.

shortened. At year-end 1991, however, all of the twenty largest life insurance companies had MSVRs that were more than adequate to meet the fully phased-in standards.

The individual importance of these factors as causes of the credit crunch is hard to isolate. They are, however, interrelated. For example, the effect of the new NAIC rating system probably would have been much smaller had insurance companies not experienced problems with commercial real estate loans. Futhermore, the new rating system, combined with the failure of First Executive, focused public attention on below-investment-grade private placements as an asset that could add to the industry's financial problems. In any case, the main impetus behind the credit crunch has been life insurance companies' fears that liability holders might lose confidence in them and redeem insurance policies, annuities, and guaranteed investment contracts should they exhibit above-average holdings of below-investment-grade securities.

Prospects for an Easing of the Crunch

As a group, life insurance companies are unlikely to resume investing in below-investment-grade private placements at pre-1990 levels until their asset problems have improved and public concern about the health of the industry has appreciably diminished. As this improvement hinges mainly on a recovery of the commercial real estate market, many analysts expect that insurers will, for the foreseeable future, remain reluctant to provide funds to the low-grade sector of the private market. This prospect has already led some insurers to cut staff and to reduce resources devoted to credit evaluation and monitoring. If the cutbacks become widespread, the long-run ability of the insurance industry to supply credit to medium-sized, below-investment-grade companies could be impaired.

Risk-based capital standards, which become effective at the end of 1993, could reinforce the reluctance of insurance companies to buy below-investment-grade securities. The new standards are aimed at measuring the prudential adequacy of insurers' capital as a means of distinguishing between weakly capitalized and strongly capitalized companies. To this end, insurance companies will report the ratios of their book capital to levels of capital that are adjusted for risk. As an insurer's ratio falls progressively below one, successively stronger regulatory actions will be triggered.

In the current environment, most insurers will probably attempt to achieve ratios in excess of one. One way they can raise their risk-based capital ratios is to shift into low-risk assets. In this regard, below-investment-grade securities carry risk weights much higher than those on investment-grade bonds and even those on commercial mortgages. Over time, however, as the financial condition of insurance companies improves and public concern about their health recedes, insurers will be more inclined to consider risk-adjusted returns in reaching investment decisions and thus may allocate a greater proportion of assets to higher-risk categories, such as below-investment-grade bonds.

Despite the almost three-year absence of insurance companies from the below-investment-grade sector and the persistence of unusually high spreads, new lenders have not picked up much of the slack in the private placement market, primarily because of the high start-up costs of entering the market. Long-term investments in expensive internal monitoring systems and staffs of credit analysts, lawyers, and workout specialists are required. Also, the market operates largely on the basis of unwritten, informal rules enforced by the desire of major agents and buyers to maintain their reputations. Thus, to an outsider, the way the market operates may be hard to understand. Being a newcomer to the market with no established reputation may involve costs. These factors may inhibit outside investors from risking their money in this market.

State and large corporate pension funds are natural candidates to fill the gap left by the insurance companies in the private market because of their demand for fixed-rate investments. Many pension funds, however, have charters that prevent them from investing in below-investment-grade or illiquid assets. Most pension fund managers are also reportedly reluctant to invest in an unfamiliar market. Because pension funds generally lack the necessary capabilities for due diligence and monitoring, their managers have difficulty familiarizing themselves with the private market by making small initial investments. A decision to invest in below-investment-grade private placements involves a significant long-term commitment of resources that few pension fund managers appear to find attractive. In the case of state pension funds, even if they wished to invest, many would face problems in hiring the necessary personnel because state legislatures generally control staff sizes and salaries. Any attempt by state pension funds to hire large numbers of credit

analysts thus could run into political obstacles.

Pension funds (and others) might quickly enter the private market by investing in funds managed by professional private placement investors. Several funds have been formed in the past two years, but they are unlikely to operate on a scale sufficient to fill the void left by the insurance companies. Pension fund managers appear reluctant to invest even indirectly in a market with which they are unfamiliar. In addition, some are concerned that fund managers would not monitor borrowers with sufficient diligence. Also, insurance companies, which would be the primary source of the managerial resources necessary for operating of managed private placement funds, have thus far not set up funds on a large scale, even though some companies currently have excess capacity to analyze and monitor lower-quality credits. Some are unwilling to make a long-term commitment of resources to this effort because they expect eventually to resume investing in below-investment-grade private placements for their own accounts. Finally, most institutional investors would expect insurance companies acting as investment managers to purchase some of the securities for their own accounts. Such a requirement lessens the incentive to establish managed funds because of insurers' current aversion to purchasing below-investment-grade bonds.

Finance companies face much smaller start-up costs than pension funds do, but their participation has traditionally been in the highest-risk segment of the private placement market, a segment in which life insurance companies have not generally been active. Insurers typically have made unsecured loans, mainly to the highest-quality speculative-grade borrowers. In contrast, finance companies specialize in secured lending, normally with equity features attached. Thus, the risk–return profile of the typical insurance company borrower does not suit finance companies, nor would such borrowers generally find finance companies' terms attractive. In addition, several finance companies that were significant lenders in the private market have reduced their lending to low-rated firms because they have been faced with credit problems of their own.

Marginal increases in the number of lenders and in their commitments to below-investment-grade private placements may not have much effect on the credit crunch. With only a few lenders remaining in this segment of the market, and with most of these willing to lend only a limited amount to any one borrower, agents often have difficulty putting together a syndicate of lenders sufficient to purchase even medium-sized issues. Because the agents must incur fixed costs before a deal can be proved viable, and because they are paid only upon success, most agents have also withdrawn from the below-investment-grade segment of the market. This situation explains an apparent paradox: Those few remaining, willing lenders sometimes complain that not enough prospective issues are coming to market to permit them to lend all their funds available for below-investment-grade borrowers. Thus the crunch may disappear only with a wholesale return of life insurance companies to this market segment or with the entry of a significant number of new lenders.

One development that may have eased the crunch for a few borrowers is the increased frequency of ratings of private placements by major rating agencies. Issuers on the cusp between a NAIC-2 and NAIC-3 often obtain ratings from one of the agencies before seeking ratings from the NAIC. Because the agencies charge higher fees for ratings than does the NAIC and are less overworked, they can often gather more information and conduct more extensive analyses, which sometimes justify investment-grade ratings.[154] The NAIC generally accepts such ratings but reserves the right to overrule them.

Effects on and Alternatives of Borrowers

The effect of this credit crunch on the economic activity of potential borrowers is impossible to assess with any precision. As private placements are seldom the vehicle for providing day-to-day working capital, it seems unlikely that many

154. Although the NAIC does consider covenants and collateral in rating an issue, the agencies may be able to give more consideration to these factors. The appropriate focus of a rating procedure is somewhat different for public bonds than for private placements. Investors in public bonds tend to be passive and ill-prepared to work through instances of borrower distress and thus are interested mainly in the likelihood of default, which may be relatively insensitive to covenants and collateral (which, in any case, are rare in public bonds). Investors in private placements, however, are prepared to deal with distress and are interested primarily in the likelihood of loss rather than default. Methods of rating public bonds that focus on distress may thus produce ratings of private placements that are too low on average, as they do not consider covenants and collateral. Thus, most issuers seeking a rating have gone to agencies whose ratings do measure likelihood of loss. Of the four rating agencies whose ratings are accepted by the NAIC, Fitch and Duff & Phelps have produced such ratings for some time, and Standard & Poor's has recently developed a rating system specifically designed for private placements that focuses on likelihood of loss. Moody's is the fourth approved agency.

potential borrowers have failed because of a lack of financing. Private placements often provide funds for expansion, however, and the growth of some medium-sized businesses possibly has been constrained by this credit crunch. According to market participants, one rationale for private issuance is not only to lengthen the maturity of their debt but also to loosen constraints imposed by the collateral requirements typical of bank loans. Many medium-sized borrowers can obtain bank loans only in amounts up to 50 percent of finished inventory and 80 percent of eligible receivables. Often, upon reaching those limits, borrowers have issued an unsecured private placement, used part of the proceeds to pay down the bank debt, and used the remaining proceeds and new bank debt to finance expansion.

With that course no longer open, low-rated borrowers must attempt to find other sources of capital. The bank loan market seems to be the first alternative for many lower-rated borrowers. Although market participants disagree somewhat, most report that the credit problems at commercial banks have caused these banks to limit lending, to tighten terms as lines have come up for renewal, or even to eliminate lines of credit. This view is confirmed by the surveys of the lending terms of large banks periodically undertaken by the Federal Reserve System.[155] Furthermore, some insurance companies have reportedly had to increase their loans to existing borrowers whose credit lines have been cut by their commercial banks.[156]

Some low-rated companies have taken advantage of favorable stock market conditions in 1991 and 1992 and issued equity. In some cases, the reduced leverage resulting from equity injections has raised issuers' credit ratings to investment grade, and has given them renewed access to the private bond market. Alternatively, some firms have attached credit enhancements to their private placements to move up to an investment-grade rating. The public junk bond market, despite its revival in the latter half of 1991, has been a source of funds for only a few companies, as the typical below-investment-grade private issue is generally too small and too complex a credit for the public market.

155. Board of Governors of the Federal Reserve System, "Senior Loan Officer Opinion Survey," various issues.

156. Interestingly, some of the movement of borrowers between banks and insurance companies seems to have been a function of the different ways in which regulators and rating agencies classify high-risk credits. Some credits (admittedly few in number) that carried a highly leveraged transaction (HLT) designation, yet were rated NAIC-2, have found a much warmer reception in the private market than at the banks. Conversely, some issues rated NAIC-3 or below by the NAIC but not carrying the HLT status reportedly have satisfied their financing needs at banks rather than at the insurance companies.

Conclusion

The market for privately placed debt is served by lenders that are financial intermediaries. As such, the market is vulnerable to breakdowns, which occur when those who provide funds to the financial intermediaries are no longer willing to do so or when intermediaries become sensitive to the threat of such a withdrawal. This mechanism appears to be the main one behind the recent credit crunch for below-investment-grade borrowers.

The conditions causing the breakdown in financial intermediation at life insurance companies appear unlikely to ease significantly in the near future. With other lenders and markets unable to fully accommodate the financing needs of the medium-sized, below-investment-grade companies that are most affected, those companies may for several more years have more difficulty than usual in financing expansions.

2. The Current and Prospective Roles of Commercial Banks

Commercial banks participate in the private placement market as issuers, buyers, and agents. They also compete with private market lenders in providing credit. Drawing on parts 1 and 2, this section describes the current role of banks in the private placement market and speculates about their role in the future.

Banks as Agents and Brokers

U.S. commercial banks have recently been strong competitors in the market for private placement agenting services. Of the 5,550 private placements of debt appearing in the IDD database for 1989–91, U.S. commercial banks were either sole agent or co-agent for 1,944, or 35 percent. Their share of volume was 32 percent.[157] Foreign banks had a 1 percent share of all volume.[158] In the

157. The amount of a co-agented issue was split equally among co-agents in computing shares of volume.

158. Any subsidiary, branch, or bank owned by a foreign bank was classified as a foreign bank agent.

14. U.S. bank agents of private placements, 1989–91[1]

Agent	Deals (number)	Volume (millions of dollars)
J.P. Morgan	289	24,299
Citicorp	184	14,577
Chase Manhattan	301	13,621
First Nat'l Bank of Chicago	346	11,126
Bankers Trust	206	10,988
Chemical Bank	239	10,927
Continental Bank	160	6,811
Bank of America	133	6,399
Manufacturers Hanover	100	5,768
NationsBank/NCNB	55	3,875
Mellon Bank	94	1,012
Security Pacific	19	598
PNC Financial Corp	2	127
First Continental Bancshares	1	75
First National Bank of Boston	5	75
Texas Commerce Bank	2	40
Corestates	1	40
Huntington National Bank	1	25
NBD Bank	2	23
Northern Trust	1	13
Shawmut	2	10
First California	1	7
State Street Bank & Trust	1	7
Fleet National Bank	1	4
Banc One	1	2
Total	**2,147**	**110,449**

1. Number of deals and volume include placements of both debt and equity. The list of banks is surely incomplete because (1) some banks may not report agent activity to IDD, and (2) some that do report may not be identifiable as banks from the information in the IDD database.

SOURCE. Computations using data from IDD Information Services.

market for private equity agenting, U.S. banks had a 14 percent share of volume during 1990–91, whereas foreign banks had a 6 percent share.[159]

During 1975–77, U.S. banks had only about a 7 percent share of the total private placement agenting market (Board of Governors, 1977). Their share has clearly grown substantially during the ensuing fifteen years.

Table 14 lists the twenty-five U.S. banks that appear as agents in the IDD database for the period 1989–91, along with the number and volume of assisted placements of both debt and equity. Two things about the list are striking. First, only ten banks accounted for 98 percent of the known volume of new issues assisted by banks. Second, the list is relatively short when compared with the list of more than 10,000 commercial banks in the United States. The table is surely incomplete, as some banks that act as agents may not report their transactions to IDD; however, it does show that apparently only a small fraction of banks act as agents.

As a group, commercial banks do not appear to specialize in assisting types of transactions or issuers in industries that are different from those assisted by investment banks.

Regulatory restrictions may to some extent reduce banks' ability to compete in the agenting market. In particular, the few banks possessing section 20 subsidiaries with full debt and equity underwriting powers may have a competitive advantage over banks having no such powers.

Why Do Banks Act as Agents, or Why Is the List of Bank Agents So Short?

Banks appear to enter the private placement agenting business for two reasons. First, such business can generate profitable fee income. As noted previously, almost no data are available on agents' fee income, costs, or profits. On the basis of scanty knowledge about staff sizes and fee rates gleaned from interviews, we speculate that agenting is quite profitable for those banks doing a high volume of business. For those that assist in only a few transactions, and thus cannot capture economies of scale, agenting may be only marginally profitable.

Second, banks may act as agents as part of a strategy of offering a broad array of corporate financial services, not just loans. In section 2 of part 2 we argued that economies of scope exist between private placement agenting and other lines of capital market business, such as making loans or underwriting securities. The relationship officers of commercial and investment banks are the primary sources of prospective clients for private placement agenting. An institution must provide financial services to many corporate clients to generate a flow of agenting business sufficient to justify maintaining an agenting group. Table 15 provides evidence in support of this assertion. It ranks the top twenty-five U.S. bank holding companies by volume of commercial and industrial loans on the books at the end of 1991, and gives the known private placement agenting volume (debt only) for such banks during 1989–91. As tables 14 and 15 reveal, all the top ten bank agents were among the top twenty-five holders of commercial and industrial loans, and the majority of the top lenders also acted as private placement agents.

159. Our database does not include private equity issued during 1989.

15. Top twenty-five bank holding companies by commercial and industrial loans, and agenting volume

Billions of dollars

Bank holding company	C&I loans	3-year agenting volume
Citibank	33.9	14.6
Bank of America	21.3	6.4
Chase Manhattan	18.6	13.6
Manufacturers Hanover	16.6	5.8
Bank of New York	14.4	. . .
NCNB (TX, FL, and NC)	13.0	3.9
Chemical Bank	11.7	10.9
First National Bank of Boston	11.2	.1
Morgan Guaranty	10.5	24.3
Security Pacific	10.2	.6
Wells Fargo	9.8	. . .
Continental	8.9	6.8
First National Bank of Chicago	8.2	11.1
Mellon Bank	8.1	1.0
National Westminster USA	6.3	.3
NBD Bank	5.9	.2
Bankers Trust	5.5	11.0
Union Bank	4.8	. . .
Corestates Bank	4.5	.4
Pittsburgh National Bank	3.8	. . .
Marine Midland	3.4	. . .
Wachovia Bank (North Carolina)	3.3	. . .
Manufacturers Bank	3.3	. . .
Texas Commerce Bank	3.0	.4
First Union National Bank	3.0	. . .

1. C&I loan holdings are as of December 31, 1991. The three-year agenting volume is for 1989–91: it includes only placements of debt.

. . . Bank does not appear in the IDD database for 1989–91.

SOURCE. Computations using data from IDD Information Services and regulatory filings.

Prospective Changes in Market Share of U.S. and Foreign Banks

As noted, the agenting market share of U.S. banks has increased substantially during the past fifteen years. During interviews, market participants offered two explanations. First, as banks have lost commercial and industrial loan business to other lenders or markets, they have become increasingly interested in selling a broad array of financial services to corporations. Many have also reorganized their operations, converting loan officers into relationship officers that operate more on the investment bank model of customer relationship management. This reorganization has increased banks' efficiency at identifying potential clients for private placement agenting and at winning their business.

Second, according to some participants, investment banks had placed a lower priority on their private placement businesses during the mid-1980s and instead emphasized lines of business related to mergers and acquisitions. If true, this change may have provided banks with a window of competitive opportunity that they exploited.

Foreign banks began entering the agenting market only during the past few years. Their entrance was coincident with two events: an increase in issues of private placements by foreign borrowers and a substantial increase of foreign banks' share of the market for commercial and industrial loans. Foreign bank agents may have an advantage in winning the business of foreign borrowers. Relationship officers of foreign banks can probably market private placement agenting services in much the same way, and with much the same effectiveness, as relationship officers of U.S. banks.

Prospective changes in market share are difficult to assess. Having learned to exploit their agenting opportunities more efficiently, banks are unlikely to lose expertise or to abandon the private market. U.S. banks may gradually lose market share if their share of all corporate financial services declines. They may gain market share if their efficiency continues to increase. Foreign banks seem likely to continue to have some presence in the agenting market, but beyond that their prospects are impossible to assess. Banks will probably not come to dominate agenting because investment banks are intent on remaining competitive.

The Role of Regulation

Banks and their subsidiaries may engage in agenting without prior permission; they are subject only to prudential supervision that focuses on ensuring disclosure of possible conflicts of interest. Bank holding companies and their nonbank subsidiaries, including section 20 (securities) subsidiaries, must obtain permission from the Federal Reserve Board to act as agents, and such agents are subject to various restrictions. See appendix C for a detailed description of legal and regulatory restrictions on the private placement agent activities of banks.

Regulatory restrictions that focus on agenting itself do not appear so far to have imposed many competitive disadvantages on banks. Limits on banks' general securities powers, however, may have imposed two disadvantages. First, banks (but not section 20 subsidiaries) are effectively prevented from acting as brokers or dealers in the

secondary market for private placements because they cannot buy and sell restricted securities for their own account. As the secondary market for private placements has been relatively small to date and banks may act as riskless principals, this disadvantage has probably been minor.

Perhaps more important are Glass–Steagal restrictions on bank underwriting of new issues of public securities. Because of economies of scope between public underwriting and the distribution stage of private placement agenting, in some cases, public security sales forces can distribute private placements more efficiently than can a private placement agenting group. Only bank holding companies possessing section 20 subsidiaries with full debt powers (and full equity powers, for private equity issues) will possess such sales forces and be able to capture the cost efficiencies. Competitive pressures will cause investment banks or commercial banks with section 20 subsidiaries to win the mandate to assist most such issues.

As market participants indicated, underwriting powers may convey another, more subtle advantage. Part of the service that a financial institution typically provides is advice that leads a borrower to issue in the private market. Such advice often includes an analysis of the relative benefits of raising funds in various of markets, including the bank loan and public security markets. The advice of an institution capable of assisting financing in all the relevant markets is likely to be afforded more credibility than the advice of one that can assist only in the market it is recommending. Credibility of advice is an important factor in the minds of many issuers as they choose an agent. Thus banks with full securities powers actually have an advantage in this regard over investment banks that do not make nor syndicate loans, as such banks can assist in three markets (loan, private, and public), while such investment banks can assist in only two (private and public). Conversely, banks without securities powers may in some situations be at a disadvantage.

Table 16 lists U.S. bank holding companies that had received Federal Reserve Board permission to have section 20 subsidiaries as of May 1992, the powers of those subsidiaries, and the location within the banking organization of the private placement agenting group, if any. All the banks

16. Section 20 subsidiaries of U.S. bank holding companies and the location of agents in the corporate structure, as of May 1992

Company	Powers			Agent location
	Basic[1]	Full debt	Debt and equity	
Banc One Corp.	Yes	. . .	. . .	Sec. 20
Bankers Trust NY Corp.	Yes	Yes	. . .	Sec. 20
Barnett Banks Inc.[2]	Yes	. . .	. . .	. . .
Chase Manhattan Corp.	Yes	Yes	. . .	Sec. 20
Chemical NY Corp. (and MHT)	Yes	. . .	. . .	Bank[3]
Citicorp	Yes	. . .	Yes	Sec. 20
Dauphin Deposit Corp.	Yes	. . .	Yes	n.a.
First Chicago Corp.	Yes	. . .	. . .	Bank[3]
First Union Corp.	Yes	. . .	. . .	n.a.
Fleet/Norstar Financial Corp.	Yes	. . .	. . .	Bank
J.P. Morgan & Co.	Yes	. . .	Yes	Sec. 20
Liberty National Bancorp[2]	Yes	. . .	. . .	. . .
NationsBank Corp.	Yes	. . .	. . .	Bank
Norwest Corp.	Yes	. . .	. . .	n.a.
PNC Financial Corp.	Yes	. . .	. . .	Bank
Security Pacific Corp. (now BofA)	Yes	. . .	. . .	Bank
Southtrust Corp.[2]	Yes	. . .	. . .	. . .
Synovus Financial Corp.	Yes	. . .	. . .	n.a.

1. Subsidiaries authorized to underwrite and deal in certain municipal revenue bonds, mortgage-related securities, commercial paper, and asset-backed securities.

2. As of May 1992, did not yet have permission to act as agent for private placements in the section 20 subsidiary.

3. Some fees earned on agenting of private placements by the section 20 subsidiary were reported to the Federal Reserve but not enough to account for agenting volume listed in IDD. Anecdotal evidence indicates that these banks may have more than one agenting group, with groups specializing, and that some banks with agents in the bank perform distributions of some placements through the subsidiary sales force and book some income in the subsidiary.

n.a. No signs of agenting activity observed in IDD or in regulatory filings.

SOURCE. *Federal Reserve Bulletin* and miscellaneous regulatory filings.

with full securities powers have chosen to locate their agents (if any) in the section 20 subsidiary whereas, to our knowledge, only one of those with partial securities powers has chosen to do so. This difference may occur for two reasons. First, the advantages that full securities powers confer on agents may outweigh costs of the additional regulatory restrictions that are imposed when they are located in a section 20 subsidiary. Second, and perhaps more important, regulations limiting the fraction of revenue a section 20 subsidiary may earn from ineligible underwriting activity encourage the holding company to move eligible activities (which include agenting of private placements) into the section 20 subsidiary to prevent the limitations from binding.

The three largest bank agents are located in section 20 subsidiaries with full powers. However, other banks without full powers do a substantial agenting business. Thus, lack of securities powers does not seem to be an absolute barrier to agenting of private placements.

Banks as Issuers of Equity

The private placement market appears not to be an important source of equity capital for U.S. banks. Table 17 lists the private equity issues of U.S. banks during 1990–91 that appear in the IDD Information Services data base.[160] U.S. banks issued about $2 billion of equity in the private placement market during 1990–91, but $1.25 billion was in a single placement of convertible preferred stock by Citibank with a foreign investor. Only twelve individual issues appear on the list, and several of the issuers are relatively well known and presumably could issue in the public markets without great difficulty. During this period the number and total volume of issues by foreign banks was also not large (table 18).[161]

The legal separation of banking and commerce in the United States may be one reason banks do not issue much private equity. The Bank Holding Company Act of 1956, the amendments of 1970 to that act, and Federal Reserve Board rulings prevent nonbank corporations from owning or controlling banks or bank holding companies.

17. Private placements of equity by U.S. banks, 1990–91

Issuer	Amount (millions of dollars)	Date
Citicorp[1]	1,250.0	3/91
Team Bank	200.0	1/90
Manufacturers Hanover Trust[1]	200.0	5/91
Bank of New England	150.0	10/90
LaSalle National	60.0	1/90
AmeriTrust	60.0	3/90
NCNB Texas National Bank	56.0	1/90
SouthTrust	16.3	12/91
Larimar Bancorporation	16.5	5/91
North Fork Bancorporation	11.1	6/91
First Commercial Bancorp	11.0	2/91
Banc Plus	20.0	10/91
Total	**2,050.9**	

1. The Citicorp and Manufacturers Hanover issues were of convertible preferred stock and were Rule 144A issues. Details of the other issues are not known.

SOURCE. IDD Information Services.

Acquisition of more than 5 percent of the voting stock of a bank or bank holding company requires Federal Reserve Board approval. As appendix B notes, most private equity is purchased by institutional investors, especially pension funds, which tend to take large blocks of individual offerings. When a purchase would amount to more than 5 percent of a bank's total capital, costs of obtaining regulatory approval would reduce the issue's attractiveness for purchasers.

18. Private placements of equity by foreign banks, 1990–91

Issuer	Amount (millions of dollars)	Date	Rule 144A
Indosuez Holdings	150.0	91	Yes
Grupo Financiero Bancomer	121.0	11/91	. . .
Toronto Dominion Bank	64.8	3/91	. . .
Banque National de Paris	52.5	3/90	. . .
NMB Postbanken	48.0	1/90	. . .
Barclays	50.0	4/90	. . .
Banco Hispano Americano	20.0	7/90	. . .
Espirito Santo Financial Holding	15.7	7/90	Yes
Credito Italiano	9.1	91	Yes
Banco Exterior International	.8	2/90	. . .
Thai Farmers Bank	.7	91	Yes
Total	**532.6**		

SOURCE. IDD Information Services.

160. No issues of equity by savings and loans appear in the data base for this period.

161. The tables are surely an incomplete representation of banks' issuance. The method by which IDD collects information (voluntary reporting by agents) favors the reporting of larger transactions assisted by relatively high volume agents. Many small transactions likely are missed.