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Information asymmetry and self-selection bias in bank loan announcement studies[☆]

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ABSTRACT

Event-study driven research has produced a consensus that loans are unique relative to other financial contracts. But these studies assume that small samples of loan announcements adequately represent the loan population. We find that loan announcements are rare and driven by factors such as information asymmetry and perceived materiality. We show that the sample used by Billett, Flannery, and Garfinkel (1995) fails to represent the loan universe and that significant abnormal announcement returns are confined to their smallest firms. Our sample, which better represents the loan population, produces an abnormal return insignificantly different from zero. The findings suggest that self-selection bias affects extant loan announcement research and do not support the views that loans are a special form of finance or that private and public debt differ in significant ways. Were all loans to be announced, the average abnormal return would likely be insignificant.

1. Introduction

There is consensus in the literature that bank loans differ significantly from other forms of finance. That conclusion follows from a large body of research showing that announcements of bank loan agreements result in positive abnormal equity returns for borrowers, on average. Because announcements of bond financings generate no significant abnormal returns and stock issues yield negative abnormal returns, researchers infer that loans are *unique* or *special*. Although banks originate a large number of commercial loans every year, loan announcement studies typically use relatively small samples.[1] Nonetheless, researchers commonly draw inferences from the results concerning the population of loans, because they implicitly assume that all loans are equally likely to be announced.

We focus on the prospect that loan announcements may be selective and investigate the factors that affect the decision to announce a loan. We also examine how sample selection problems can bias the outcomes of loan announcement studies. We find that only about one-fourth of bank loan acquisitions are announced and that firms with announced loans differ systematically from those with unannounced loans. The presence of

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[1] The average sample size is 446, with a range from 117 to 728, in the studies by James (1987), Lummer and McConnell (1989), Slovin, Johnson, and Glascock (1992), Best and Zhang (1993), Preece and Mullineaux (1994), and Billett, Flannery, and Garfinkel (1995).

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information asymmetries strongly affects the prospect that a borrower will announce a loan. *Material* loans, meaning those that are large relative to the borrowing firm's asset base, or loans made to firms facing actual or prospective cash flow problems, are also more likely to be announced. Loans that remain unannounced go to large, less information-problematic firms where investors are less likely to view a new loan as material information. We conjecture that loans to these firms would not elicit a significant market response, even if made public. Among announced loans, we find that only those to the smallest decile of borrowers elicit significant reaction. Consequently, we conclude that only a small subset of loans is special, at best.

The paper proceeds as follows. Section 2 offers hypotheses about the nature of bank loan announcements, addressing issues the literature has ignored to date, such as what parties will announce loans and under what circumstances. Section 3 offers several tests of the hypotheses, and provides estimates of logistic models for loan announcements. Section 4 provides an analysis of the results of a well-known study of loan announcements motivated by our findings on announcement decisions. Section 5 concludes.

2. Why do borrowers – or others – announce loans?

The conclusion that bank loans are a special type of financial contract and/or that banks have unique capabilities relative to other financial firms follows from research based on event studies. Many researchers report that positive and significant abnormal returns attend to announcements that firms have signed a bank loan agreement. James (1987) is a widely cited example of such research and he finds a sizeable average excess return of 193 basis points. He views the result as consistent with Fama's (1985) conjecture that banks are "unique" institutions because they gain insider-like information through lending and deposit relationships. Many studies replicate the results of James's paper, although often with qualifications.[2] For instance, Lummer and McConnell (1989), Preece and Mullineaux (1994), and Billett, Flannery, and Garfinkel (1995) report significant excess returns of 0.61%, 0.79%, and 0.68%, respectively. Generally, researchers seem to agree that loans differ somehow from other debt contracts and that institutions offering loans are likewise unique, in some sense.

The relevant population for addressing whether loans differ from other financings is the totality of loans made to business borrowers. However, unlike other forms of finance raised by public companies, the Securities and Exchange Commission (SEC) does not generally require the public announcement of loan financings.[3] The exception to this rule would be a loan "that arises other than in the ordinary course of doing business" (SEC, Form 8-K, General Instructions). Nor does the SEC consider a bank loan a "security" potentially subject to registration requirements. Consequently, a firm's decision to reveal a bank loan acquisition is in most cases discretionary. The extant literature therefore necessarily relies on a sample of loans that get announced, with the implicit assumption that announced and unannounced loans are identical in all important respects. We examine this assumption's validity by considering the factors that would motivate a borrower to reveal the successful conclusion of a loan agreement. Corporate finance decisions are seldom random and managers typically self select their choices in a wide variety of situations (Chaney, Jeter, and Shivakumar, 2004; Li and Prabhala, 2007; McNichols and O'Brien, 1997). Firms may have preferences not just across different types of funding, but also about whether to publicize their financing decisions.

Announcing a loan can lower information asymmetry between a borrowing firm and its investors. Diamond (1985) demonstrates that disclosure can be an optimal policy both because it generates cost savings for investors who would otherwise attempt to acquire costly information and because it can improve risk sharing by making investor expectations more homogeneous and reducing the speculative positions of informed traders. Diamond and Verrecchia (1991) show that increased disclosure can decrease a firm's cost of capital by reducing information asymmetries. But the sizeable disclosure literature reveals a large variation in predicted outcomes. For example, Verrecchia (2001) notes that, in some models, increased disclosure results in more information asymmetry and that the empirical evidence is sparse on the relationship between disclosure and information asymmetries. Our initial hypothesis directly links loan disclosures to information asymmetries.

Hypothesis 1. Firms that present higher levels of information asymmetry to investors will be more likely to announce their loan financings.

Although SEC rules do not mandate the reporting of bank loans, public firms are required to disclose all "material" events within four business days of their occurrence on Form 8-K (SEC Staff Accounting Bulletin No. 99—Materiality). Accounting rules state an event is material if it potentially impacts the financial position of the firm or the value of its shares. We hypothesize that borrowers will view bank loans as material in certain circumstances and consequently will be more inclined to reveal such financings. For example, if a bank loan is large relative to the borrower's existing asset base, the new

[2] For example, loans generate positive abnormal returns and consequently are special when they are made (1) to small firms (Slovin, Johnson, and Glascock, 1992), (2) to firms facing earnings uncertainty (Best and Zhang, 1993), (3) by nonbanks (Preece and Mullineaux, 1994), (4) by reputable lenders (Billett, Flannery, and Garfinkel, 1995), (5) by syndicates with few lenders (Preece and Mullineaux, 1996), (6) in amounts of \$10 billion or more (Mosebach, 1999), (7) by lenders not using loan sales or securitization (Marsh, 2006), or (8) with larger portions retained by arrangers (Focarelli, Pozzolo, and Casolaro, 2008). Billett, Flannery, and Garfinkel (2006) find that bank loans are not special, however, when abnormal returns are estimated over a longer period, such as three years.

[3] Public issues of debt or equity must be disclosed via the registration process. Private issues of equity, debt, or capital and operating leases must be disclosed in an 8-K filing.