

## **THE MOTIVATIONS FOR LOAN COMMITMENTS BACKING COMMERCIAL PAPER**

### **A Comment on ‘Commercial Paper, Bank Reserve Requirements, and the Informational Role of Loan Commitments’**

**Charles W. CALOMIRIS\***

*Northwestern University, Evanston, IL 60201, USA*

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Bank loan commitments backing commercial paper issues (other than credit guarantees) insure against systemic liquidity risk by providing an alternative to rolling over maturing paper. The form of these commitment contracts, the fact that they are issued only by banks, and the determinants of variation across issuers in the extent of commitment backing are consistent with their role as liquidity insurance and not with a recently espoused view that commitments signal firm quality.

The motivations usually identified to give rise to the connections between commercial paper issues and back-up bank loan commitments are given little attention in the recent paper on this topic by Kanatas (1987). These motivations are typically referred to as ‘credit enhancement’ (providing security against default risk) and ‘liquidity enhancement’ (insulating firms from the risk of economy-wide financial crisis). The first of these is abstracted from, not denied, by Kanatas. The second motivation (which is typically invoked to explain the majority of commercial paper backing) Kanatas dismisses by assumption. Instead he proposes that bank loan commitments are undertaken by commercial paper issuers as a signal of their (high) unobservable project quality, which then reduces their cost of funds in the market. This model is meant to explain the ‘stylized fact’ that firms with a high percentage of backing for their commercial paper tend to have high commercial paper ratings.

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This 'stylized fact', which Kanatas' model is designed to explain, is not apparent in the data. The correlation between ratings and percentage backing is actually *negative*. Of the more than 1,400 commercial paper issuers listed in the December 1986 Standard and Poor's *Commercial Paper Rating Guide*, only 59 reported backup lines of less than 100 percent. The remaining borrowers all had 100 percent backing. All but two of the 59 issuers with less than full backing had ratings of A1 or A1+; the remaining two had an A2 rating. Fifteen of these 59 borrowers had backing of less than 50 percent – these include such high quality risks as CITICORP, EXXON Credit Corp., Gotabanken, Manufacturers Hanover, Irving Bank Corp., Nordbanken North America, PK Banken, Republic Bank, Svenska Handelsbanken, Swed Bank, and GMAC. No firms had less than 10 percent backing.

Additionally, there is evidence in favor of the traditional explanations of loan commitments backing commercial paper which is not easily dismissed. Kanatas recognises, but abstracts from, the 'credit enhancing' class of loan commitment contracts which back commercial paper. These instruments – irrevocable revolving credit, standby letters, insurance company indemnity bonds, foreign-bank guarantees, and direct pay commitments – are a special (and small) part of the market. Domestic standbys and the like accounted for 17 percent of outstanding dealer-placed commercial paper and 9 percent of total commercial paper at the end of 1986.<sup>1</sup> Kanatas is right to view the motivation for issuing these 'guarantee' instruments as quite different from the motivation for most of bank backing of commercial paper, which more often takes the form of commitments from which banks may withdraw when an individual firm's credit-worthiness deteriorates. These 'non-guarantee' commitments are the focus of Kanatas' paper and to these I now turn.

First, it is worth noting that banks are the ones who issue the 'non-guarantee' loan commitments which back commercial paper. Kanatas' explanation for this fact – which appears in a footnote – is the common one: the Fed's discount window gives banks an edge over the commercial paper market in being able to assure liquidity.

The most telling and often-cited example of the usefulness of the discount window (and of the importance of liquidity risk in the commercial paper market) is the failure of Penn Central in 1970. When Penn Central failed, its commercial paper defaults led to a temporary 'drying-up' of the commercial paper market, even for borrowers unrelated to Penn Central. In the three weeks following Penn Central's failure outstanding non-bank commercial paper fell by \$3 billion. As Stigum (1983) writes:

'When Penn Central went bankrupt with \$82 million in commercial

<sup>1</sup>Unpublished data were provided over the phone by Fred Jensen of the Federal Reserve Board.

paper outstanding this created difficulties for all issuers, particularly those in weak financial condition' (p. 632).

Why in theory this *should* have happened is difficult to explain. That it *did* happen is a matter of fact [see Timlen (1977) for a detailed analysis of the crisis]. The Fed responded to the crisis by relaxing regulation *Q* ceilings and encouraging banks to discount freely (without suffering the usual non-pecuniary costs of heavy borrowing from the Fed) in order to pass-on loans to firms in the commercial paper market which needed to roll over their paper. Borrowing from the Fed rose to nearly *triple* the pre-crisis level.

Robert McCauley of the New York Federal Reserve Bank, and many other dealers, bankers, and central bankers I have spoken with who monitor this market, attribute the growth of commitments during the 1970s in part to the perceived need for an alternative to the type of discretionary Fed policy which averted a major liquidity crisis during the collapse of Penn Central.

Most commercial paper is of less than thirty-day maturity. An interruption in the market of even a few days can mean massive defaults or 'fire sales' on the part of firms without backup lines. Kanatas (1987, p. 428) argues that timely loans from banks should always be available for credit-worthy firms, even in the absence of loan commitments (or, I suppose, a discretionary Fed policy response); this amounts to assuming that costly liquidity crises cannot occur in the commercial paper market. History contradicts that assumption. One explanation for why commitments are needed to facilitate loans during a crisis may be the advantage of the reduction in the time needed to process the loan. Additionally, banks may suffer less non-pecuniary costs of borrowing from the Fed if they can show that their borrowing occurred in order to alleviate liquidity constraints in the commercial paper market – that is, if they can show that their loans rose because of draw-downs on lines backing commercial paper. Finally, credible insurance against liquidity crises may itself reduce the likelihood of systemic rationing in the commercial paper market, in the same way deposit insurance reduces the incentives for runs on banks.

That liquidity seems the principal motivation for commitments is reflected in the type of firms with the least backing. The firms with the highest cash flow – banks and the like – typically maintain the *lowest* percentage of back-up relative to outstanding paper (as the above list of low-backing borrowers shows), while the firms with less favorable cash flow, but equally good ratings, usually maintain full backing for their issues. Similarly, the extent of bridging 'swing lines' typically required of foreign commercial paper issuers depends crucially on liquidity – for example, foreign bank commercial paper issuers are not usually required to maintain them.<sup>2</sup>

<sup>2</sup>Mahesh Kotecha of Standard and Poor's provided this information.

Additionally, some of the assumptions of Kanatas' signalling model seem inconsistent with actual loan commitment contracts backing commercial paper. In the Kanatas model, 'good' (low-risk) firms reveal their identities by paying a commitment fee and arranging in advance to borrow at a low rate *in the future*, conditional on the future full-information evaluation of their risks by the market. This signalling requires that the following assumptions hold:

- A.1. Lenders have *better information* about default risk at the time the commitment can be exercised than they do at the time it is written.
- A.2. Commitments cannot be exercised immediately (from A.1).
- A.3. Commitments specify precise borrowing terms and those who value commercial paper know the precise terms of the agreements.
- A.4. Banks only honor commitments if they wish to, *ex post* (i.e., commitments do not insure firm profits).

The first three assumptions are unfortunate features of the model since in practice commitments which back commercial paper are available without any lag and often do not specify a precise loan rate formula. Under these conditions commitments cannot provide the signal Kanatas describes.

Specifically, the Fed divides the data for loan commitments into four categories in Statistical Release G-21: 'term', 'revolving', and 'other' formally detailed commitments; and informal 'confirmed lines' which do not specify precise loan interest rates. Term commitments have a maturity (deadline) of greater than one year. Revolving commitments may be drawn at any time, and once repaid, rebound in full. 'Other' commitments are other detailed formal arrangements specifying terms and conditions. Confirmed lines are defined as 'general expressions of willingness to lend, other than for term loans or revolving credits, that are made known to the customer but not characterized by detailed formal arrangements specifying the terms and conditions under which a loan is to be made'. Brady (1985, p. 1) describes these informal commitments in detail:

'Lines are relatively informal arrangements under which banks agree that on demand they will quote a price on a fixed-rate loan for a particular amount and maturity (usually under a year) selected by the borrower, within specified limits....By widening or narrowing their markups, banks can affect the quantity of these loans outstanding'.

All of these commitments are *immediately available* lines of credit, not lines which become available with a lag. Frank Kromholz, Second Vice President and Commercial Paper Product Manager for Chase Manhattan Bank confirmed this fact: 'once we've agreed to back up the customer, it's in place

at that moment'. Kromholz also confirmed the fact that Chase's commitments backing commercial paper have flexible rather than pre-determined loan-rate formula, and he described non-guarantee commitments as 'hurricane insurance' against systemic liquidity risk.

Empirical evidence also indicates that 'confirmed lines' are closely linked to commercial paper. Using monthly data from September 1977 to December 1985 on the four reported commitment categories, only confirmed lines proves to be economically important and statistically significant as a predictor of monthly non-financial commercial paper growth. As the following regression shows, it enters with a highly significant coefficient of 0.89.<sup>3</sup>

$$\begin{aligned}
 DLC = & 0.001 + 0.20 DLC_{-1} & + 0.887 DLCONF_{-1} \\
 & (0.11) & (0.355) \\
 & -0.061 DLTERM_{-1} & + 0.006 DLOTHER_{-1} \\
 & (0.01) & (0.006) \\
 & -0.008 DLREV_{-1} & + e; \\
 & (0.180) &
 \end{aligned}$$

$$R^2 = 0.24; \text{ Durbin-Watson} = 1.96.$$

All variables are log differences, *DLC* is non-financial commercial paper, *DLCONF* is confirmed lines, *DLTERM* is term lines, *DLREV* is revolving credit, and *DLOTHER* is other formal lines. Standard errors appear in parentheses.

Thomas Brady of the Federal Reserve Board, who is responsible for compiling these series, noted that another indicator of the close link between commercial paper issues and confirmed lines is the relatively small proportion of these lines which are ever drawn upon. That is, since many of these lines insure systemic liquidity risk in the commercial paper market, they are infrequently used.

A final piece of evidence which seems to contradict assumption A.2 comes from those who rate commercial paper. They appear not to pay close attention to the details of commitment contracts. Standard and Poor's, in an April 1986 issue of *Credit Week International* [Bates (1986, p. 18)], makes clear that it is uninterested in the terms of the loan commitments, so long as the existence of the commitment is confirmed in writing:

'To be viewed as eligible, back-up lines must be confirmed in writing. An oral commitment is not sufficient. The form of compensation, if any, for the line is strictly between the issuer and the issuer's bankers'.

<sup>3</sup>Variables are defined in log differences. Monthly dummies are included but not reported. Data on non-financial commercial paper are from the *Federal Reserve Bulletin*; data on unused loan commitments are from Federal Reserve Statistical Release G-21.

This express lack of interest on the part of Standard and Poor's seems incompatible with Kanatas' signalling approach.<sup>4</sup>

Furthermore, Standard and Poor's confirms the importance of the liquidity-insuring role of commitments and explains the joint roles of cash flow and credit risk in determining the required proportion of backup lines in the same issue of *Credit Week International* (1986, pp. 17-18).

Most issuers of Euronotes or U.S. commercial paper find it advisable to provide an alternative form of liquidity to support their short-term programs. The primary purpose of alternative liquidity is to be another source of funds during tumultuous conditions in the Euronote or commercial paper market. For example, in the U.S., some borrowers have from time to time found it difficult to roll over their maturing commercial paper because of market conditions, not because of credit problems of the issuers. Similar difficulties are even more likely to occur occasionally in the Euronote market, given its less mature nature.

Most industrials and other non-financial entities typically provide 100% back line coverage for their short-term note programs in the U.S. and Europe... Companies with the highest long-term ratings ('AA' and higher) and with very strong liquidity characteristics may provide a lower percentage of coverage. The exact amount is determined by the size of the program, the issuer's access to capital markets, and the issuer's overall credit strength. Highly rated banks (with short-term ratings of 'A1+') need not provide general back-up lines for their Euronote or commercial paper programs. Coverage levels for lower rated banks are determined in a fashion similar to non-financial issuers.

To summarize, neither the assumptions regarding the form of commitments nor the implications of the signalling model seem consistent with available evidence. Observed cross-sectional variation in the degree of backing indicates that backing is negatively related to firm quality and firm liquidity, a result which is consistent with the standard liquidity-risk-hedging explanation for non-guarantee commitments and not with the Kanatas signalling model. The rates on commitments are not set precisely in advance, they are available without delay, and the specific terms of the contracts are not matters of interest for those who value commercial paper.

One of Kanatas' main motivations for developing his model was to

<sup>4</sup>Kanatas (p. 428) argues that commercial paper rating services have no effect on the evaluation of borrowers' risks because ratings typically lag behind market perceptions. If rating services only looked at market interest rates to judge firms, however, it would be hard to understand why anyone would use rating services; and if no one paid attention to rating services, it would be hard to justify their existence. It seems more plausible to view rating services as lagging, but somewhat independent, indicators of credit risk which usually agree with earlier market perceptions, but which pay careful attention to all relevant data.

provide an explanation of loan commitments which does not depend on the implausible assumption of firm risk aversion. In this regard it is important to note that liquidity hedging in no way depends on firm risk aversion. In the presence of liquidity constraints, risk-neutral firms and individuals may exhibit seemingly risk-averse behavior [see, for example, Carlton (1979)], such as insuring themselves against systemic liquidity risk.

## **References**

- Bates, Philip S., 1986, Back-up policies for short-term notes, *Credit Week International*, April (Standard and Poor's, New York).
- Brady, Thomas F., 1985, Changes in loan pricing and business lending at commercial banks, *Federal Reserve Bulletin*, Jan. (Board of Governors, Washington, DC).
- Carlton, Dennis W., 1979, Contracts, price rigidity, and market equilibrium, *Journal of Political Economy*, Oct.
- Kanatas, George, 1987, Commercial paper, bank reserve requirements, and the informational role of loan commitments, *Journal of Banking and Finance* 11, no. 3, 425-448.
- Stigum, Marcia, 1983, *The money market* (Dow Jones, New York).
- Timlen, Thomas M., 1977, Commercial paper – Penn Central and others, in: E.I. Altman and A.W. Sametz, eds., *Financial crises: Institutions and markets in a fragile environment* (Wiley, New York).