



# What is the value of recourse to asset-backed securities? A clinical study of credit card banks

Eric J. Higgins <sup>a</sup>, Joseph R. Mason <sup>b,\*</sup>

<sup>a</sup> *Department of Finance, College of Business Administration, Kansas State University,  
Manhattan, KS 66506, USA*

<sup>b</sup> *Department of Finance, Drexel University, LeBow College of Business, 3141 Chestnut Street,  
Philadelphia, PA 19104, USA*

---

## Abstract

The present paper uses credit card securitization data to show that recourse to securitized debt may benefit short- and long-term stock returns and long-term operating performance of sponsors. Therefore, although recourse violates regulatory guidelines and FASB140, recourse may have beneficial effects for sponsors by revealing that the shocks that made recourse necessary are transitory. Sponsors providing recourse do, however, experience an abnormal delay in their normal issuance cycle around the event. Hence, it appears that the asset-backed securities market is like the commercial paper market, where a firm's ability to issue is directly correlated with credit quality.

© 2003 Elsevier B.V. All rights reserved.

*JEL classification:* G21; G28

*Keywords:* Asset-backed; Bank regulation; Credit cards; Recourse; Securitization

---

## 1. Introduction

Commercial banks have a strong incentive to sell assets in order to increase liquidity, reduce interest rate risk, and avoid burdensome regulations. However, most bank assets are high-asymmetric-information financial instruments and, as a result,

---

\* Corresponding author. Tel.: +1-215-895-2944; fax: +1-215-895-2955.

*E-mail address:* [joe.mason@drexel.edu](mailto:joe.mason@drexel.edu) (J.R. Mason).

are fundamentally illiquid. Hence, commercial banks have become increasingly reliant upon securitization as a means of selling assets.

Business strategies that revolve around securitization are accompanied by a host of incentive conflicts. At various times during the 1990s, securitization has been associated with financial difficulties arising from fictitious financial ratios (gain-on-sale provisions), understated leverage (Enron), and hidden risks (Enron, PNC, and other commercial banks). The present paper concerns itself with the last of these, that is, the propensity for securitizations to mask risks to the sponsor,<sup>1</sup> whether the sponsor is a bank originating loans or a non-bank firm posting other collateral for securitization (Calomiris and Mason, 2003; Jones, 2000).

Risks often remain with the sponsor because securitization – and the removal of assets from the sponsor's balance sheet – relies on a “true sale” to a legally remote third party. If the assets are not truly sold or the sale is not to a legally defined third party, the assets must be reported on the sponsor's balance sheet. One important condition that determines whether a true sale has taken place is whether the sale agreement provides *recourse*, or performance guarantees, to the buyer. If recourse terms are present, the assets pose a contingent risk to the seller, which, under FASB140, prohibits the removal of the assets from the seller's balance sheet.

While few loan sales contracts contain explicit terms that provide recourse, many loan sales (particularly those involving revolving collateral such as credit card loans) hinge upon an *implicit* understanding that recourse may be provided by the sponsor. Such understandings exist because sponsors wish to maintain their reputations for consistent credit quality over repeated sales (while still taking advantage of the ability, under a true sale, to remove the assets from the balance sheet). Losing a good reputation (and the ability to sell loans economically) may expose the sponsor to decreased liquidity, increased interest rate risk, and burdensome regulatory supervision. By providing recourse in cases where none is explicitly required, the sponsor demonstrates the presence of de facto recourse and therefore previously unreported contingent liabilities.

This paper examines 17 discrete recourse events that support securitized credit-card receivables sponsored by 10 different credit-card banks. We examine the market response to the support announcement, the pre- and post-recourse performance of the sponsoring firms, and the pre- and post-recourse deal characteristics of the sponsoring firms' credit-card-backed securities. We find that, conditional on being in a position where honoring implicit recourse has become necessary and conditional on actually providing that recourse, the sponsors, on average, exhibit improved short- and long-term stock price performance and improved long-term financial performance. The only penalty that recourse-providing sponsors face is an increase in the issuance time post-recourse provision. Otherwise, deal characteristics remain unchanged after recourse provision. Hence, it appears that the market

---

<sup>1</sup> The sponsor originates the assets and sells them to a bankruptcy-remote third-party trust that funds the purchase by issuing asset-backed securities.

likes implicit recourse, either because recourse provides de facto performance guarantees while still providing all the benefits of off-balance-sheet financing or because it shows that regulatory discipline can, in practice, be more lax than stated regulatory policy.

The rest of the paper proceeds by describing in Section 2 the choice of credit card banks for this study of recourse, the sample of credit card banks used, the recourse events that have taken place in the history of credit card securitization, and the recourse credit card bank sample analyzed throughout the paper. Section 3 examines short-term stock price effects around recourse announcements for recourse announcing firms and non-recourse announcing firms. Section 4 examines long-term stock price and financial performance around recourse announcements. Section 5 examines subsequent loan sale proceeds and provisions around recourse announcements. Section 6 summarizes and concludes.

## 2. Credit card banks and implicit recourse

### 2.1. *Why credit card banks?*

There are four key stages of the securitization process.<sup>2</sup> First, the sponsor sells a collateral pool to a bankruptcy-remote third-party trust or special purpose entity (SPE). In this step, the sale to the bankruptcy-remote third party – the “true sale” – is crucial to removing the collateral from the sponsor’s balance sheet in accordance with generally accepted accounting principles (GAAP – FASB 140) and regulatory accounting principles (RAP). Both GAAP and RAP stipulate that in the event a true sale is deemed to have *not* occurred, that is, if the third party is not bankruptcy remote or if the sponsor maintains control over the assets, the collateral must revert to the sponsor’s balance sheet.

Second, the SPE hires an investment bank to engineer tranches of debt securities and underwrite the sale of the securities. Before the tranche structure is complete, it is stress-tested by one or more ratings agencies to certify the investment quality of the securities. After certification is complete, the investment bank sells the issue to investors.

Third, the securitization enters the revolving stage, lasting anywhere from two to 10 years (sometimes more in the case of collateral other than credit cards). During this period a constant pool size is maintained by the SPE, from which interest and principal payments may be passed along to investors monthly. With short-term collateral like credit cards, principal collected during this stage is used to purchase additional receivables from the sponsor and replenish the investors’ portfolio. Since the sponsor and SPE have a bankruptcy-remote third-party relationship, the sponsor is expected to sell receivables to the SPE at par value, if not (higher) market value. Selling below par is usually taken as evidence that the sponsor is controlling the trust

---

<sup>2</sup> For additional background, see the ABC’s of Credit Card ABS (1997) and Moody’s (1997).

and, hence, a true sale has not, in fact, taken place. Under GAAP and RAP, therefore, the collateral should revert to the sponsor's balance sheet.

Last, the securitization enters the amortization phase. During the amortization phase, principal payments are either accumulated into a pool that will be used to repay investor principal upon a stated date or distributed to investors with monthly coupon payments across a stipulated time period (usually one year). Amortization may occur as originally planned in the securities prospectus or earlier. Early amortization is an investor remedy that is imposed if the collateral does not perform in a manner that could reasonably be expected to support payments of principal and interest to investors. Typical portfolio events that lead to early amortization in credit card securitizations are increased chargeoffs, decreased payment rates, and reduced portfolio yield. The purpose of early amortization is to repay investors before these events lead to loss of principal.

In the event of early amortization, the SPE will no longer be able to purchase new collateral from the sponsor. Hence, the sponsor must either accept new collateral on balance sheet or set up a new SPE to accept the collateral. Given the demonstrated instability of collateral performance, the latter will most likely be uneconomical. On the other hand, unless the sponsor can raise funds quickly via capital markets (which is again unlikely to be economical, given demonstrated instabilities in collateral performance), accepting new collateral on balance sheet may result in a substantially increased leverage, leading to reduced regulatory capital ratios and, potentially, regulatory insolvency.

Our choice of credit card banks as the subject of our study is related to the securitization process described above. There are three main reasons for focusing on credit card banks. First, credit card securitizations are relatively simple structures, typically consisting of one or two tranches of investor securities accompanied by an underlying credit enhancement, i.e., monoline insurance coverage, overcollateralization, collateral invested amounts, and/or cash collateral accounts. In contrast, for instance, mortgage-backed securities routinely exceed 50 tranches and often include complex features like interest- and principal-only strips and more sophisticated credit enhancement structures.

Second, although all securitizations contain early amortization clauses, the difficulty of predicting payment rates and chargeoffs in revolving collateral makes those clauses critically important in credit card securitizations. Furthermore, the revolving structure also provides a convenient avenue for providing recourse by pricing replenishment sales to the SPE below market and/or par value.

Last, general purpose credit card (VISA and MasterCard) sponsors are required by their associations to be regulated financial institutions. Furthermore, the largest credit card loan sponsors in the US are commercial banks. Commercial banks are required to maintain an 8% capital-to-asset ratio or face regulatory action. Accepting new credit card loans on balance sheet during an early amortization may result in banks' violating the 8% capital ratio. Hence, with revolving collateral (and need for replenishment) and regulatory capital requirements, credit card banks have both the ability and the need to avoid early amortization by providing recourse to outstanding credit card securitizations.

## 2.2. Implicit recourse events at credit card banks

Our data sets combine call report data on banks with Faulkner & Gray data on the quantity of managed credit card receivables and securitizations, CRSP stock price data, Compustat financial data, Securities Data Corp. data on the structure and frequency of securitizations, and Lexis–Nexis news reports of recourse events affecting credit card securitizations.

Our search of Lexis–Nexis for the period 1987 (the year of the first credit card securitization) to 2001 turned up 17 discrete recourse events involving 10 credit card banks. We identified recourse events through news filings that reported “ratings affirmations” following a period of weak collateral pool performance. The news reports usually give some description of the reason for the affirmations. During the period 1987–2001, only two credit card securitizations entered early amortization without recourse. The associated sponsors, Republic Bank (DE) and Southeast Bank, both failed, although the securitizations repaid investors full principal in the early amortization process. Table 1 lists our set of recourse events, the bank names, the dates, the recourse actions taken, and the specific securities and/or pools involved. The set of banks in Table 1 makes up our *recourse credit card bank sample*.

The 10 banks identified as providing recourse are invariably large credit card banks. The minimum securitization size among these banks in 1996 is that of Tandy National Bank with \$350 million outstanding, and the maximum is that of Citicorp, with \$25.9 billion outstanding. The dollar amount of securitizations at recourse credit card banks averages \$6.1 billion, with a median of \$3.5 billion. The average percent of total credit card loans securitized among recourse credit card banks was 42%, with a median of 45%.

Credit card lending and securitization (and hence recourse) are important for the parent companies and banks in Table 1. To gauge the importance of credit card lending to the consolidated parent firm, Table 1 shows “managed (both on- and off-balance-sheet) credit card loans as a percent of consolidated parent company on-balance-sheet assets.” These percentages range from 54% for Sears Roebuck and Company to 5% for First Union, with an average of 25% and a median of 8%. Hence, credit cards appear to be an important business line for these parent firms and bank holding companies. Surprisingly, measured by managed credit card loans as a percent of consolidated parent company on-balance-sheet assets, credit cards appear more important for non-bank firms than for the bank holding companies in Table 1. The non-bank firms (Sears, Household, AT&T, and Tandy) average managed credit card loans as a percent of consolidated parent company on-balance-sheet assets of 43% and a median of 32%, compared with an average managed credit card loans as a percent of consolidated parent company on-balance-sheet assets of 11% and a median of 5% for the bank holding companies (Citibank, Mercantile, FCC, Banc One, and First Union).<sup>3</sup>

---

<sup>3</sup> Financial and equity returns are unavailable for Prudential, since it is a non-public firm.

Table 1  
Sample description

Company	Managed credit card loans as percent of consolidated firm (BHC) on-balance-sheet total assets	Bank's on-balance-sheet credit card loans as percent of consolidated firm (BHC) on-balance-sheet credit card loans	Managed credit card loans as percent of bank's on-balance-sheet total assets	Announcement date	Trusts supported	Support provided
Sears Roebuck and Co.	54	100	1682	9/11/91	Sears Credit Account Trust 1990-C	Added higher quality accounts
Sears Roebuck and Co.	54	100	1682	10/14/91	Sears Credit Account Trust 1990–A,D,E and 1989-C,E	Removed early amortization trigger
Sears Roebuck and Co.	54	100	1682	5/18/98	Sears Credit Account Master Trust II	Increased credit enhancement – Ratings affirmation followed
Citibank	17	72 (NV, SD)	184	5/13/91	Standard Credit Card Trust 1989-2,3,4,5 and 1990-1	Lowered base rate by 2.3%
Citibank	17	72 (NV, SD)	184	3/15/93	National Credit Card Trust 1989-2,4,5 Standard Credit Card Trust 1990-1,3,4 European Credit Card Trust 1989-1,2 and 1990-1	Added new accounts – Ratings affirmation followed
Household Finance	61	100	186	3/31/93	Household Credit Trust 1991-2	Added new accounts – Ratings affirmation followed
Household Finance	61	100	186	11/13/95	Household Private Label Master Credit Card Trust II	Added new accounts, increased discount on receivables – Ratings affirmation followed

Mercantile Bank	7	51 (Hartford, IL)	309	2/12/96	Mercantile Credit Card Master Trust 1995-1	Added discounted receivables – Ratings affirmation followed
FCC National Bank	17	95 (DE)	188	7/11/96	First Chicago Master Trust II	Added new accounts – Ratings affirmation followed
AT&T	24	100	26,531	9/9/96	AT&T Universal Card Master Trust	Added new accounts
Banc One Corp.	10	25 (Dayton, OH)	205	3/5/97	Banc One Master Credit Card Trust	Increased credit enhancement – Ratings affirmation followed
First Union	5	99 (GA)	52	6/10/96	First Union Master Credit Card Trust	Removed lower quality accounts
First Union	5	99 (GA)	52	2/24/97	First Union Master Credit Card Trust 1996-1	Waived servicing fee
First Union	5	99 (GA)	52	5/19/97	First Union Master Credit Card Trust 1996-1,2	Added discounted receivables
Prudential Bank and Trust	NA <sup>a</sup>	100	101	10/21/96	PB&T Master Credit Card Trust II 1994-A	Increased credit enhancement – Ratings affirmation followed
Prudential Bank and Trust	NA <sup>a</sup>	100	101	5/96	PB & T Master Credit Card Trust II 1994-A	Added discounted receivables
Tandy Corp.	32	100	3919	8/93	Tandy Master Trust Series A	Increased credit enhancement

This table contains a description of the extent of securitization for firms providing recourse, the announcement date of the recourse provision, the trusts supported by the recourse announcement, and the type of recourse provided.

<sup>a</sup>Prudential Bank and Trust is owned by a non-public insurance company.

These credit card operations are usually concentrated in one or two banks in the holding company. The column entitled “bank’s credit card loans as percent of consolidated firm (BHC) credit card loans” illustrates that concentration. The non-bank firms in Table 1 own individual banks that form the basis for their credit card lending. Hence, those banks’ credit card loans as percent of consolidated firm (or consolidated bank holding company) credit card loans are 100%. Bank holding companies also usually concentrate their credit card operations in one or two bank charters that specialize in credit card lending and securitization. Even though First Union’s credit cards are 5% of its consolidated assets, they are primarily concentrated (99%) in First Union, GA. Similarly, the preponderance of First Chicago’s credit card loans (95%) is held in First Chicago, DE. Even Citicorp maintains the majority of its credit card loans (72%) in two charters, Citibank, SD, and Citibank, NV. Mercantile holds 51% of its credit card loans in its Hartford, IL, charter. Only Banc One distributes its credit cards more widely through its banks, the largest individual exposure being 25% in its Dayton, OH, charter.

In the event of early amortization, the charters described above are those that would be affected by the sudden accelerated on-balance-sheet loan growth. That potential growth can be gauged by “managed credit card loans as a percent of the credit card bank’s (or banks’) on-balance-sheet total assets” in Table 1. The largest exposure is at AT&T, with securitizations totaling more than 265 times on-balance-sheet bank assets. Tandy comes in second, with securitizations totaling 39 times its on-balance-sheet assets. Sears securitizes about 17 times its on-balance-sheet assets, Mercantile 3 times, Banc One about 2 times, and Citibank and FCC about 1.8 times. Prudential and First Union sell the least, securitizing only about 1 times and 0.5 times on-balance-sheet assets, respectively.

Typical actions used to provide recourse in Table 1 are adding new, higher-quality accounts to a securitized pool (cherry picking) (Sears 9/11/91, Citicorp 3/15/93, Household 3/31/93, FCC 7/11/96, AT&T 9/9/96, First Union 6/10/96); selling new receivables to the pool at a discount below par (Household 11/13/95, Mercantile 2/12/96, First Union 5/19/97, Prudential 5/96); increasing the credit enhancement (Sears 5/18/98, Banc One 3/5/97, Prudential 10/21/96, Tandy 8/93); getting investors to waive early amortization triggers<sup>4</sup> (Sears 10/14/91, Citicorp 5/13/91); and getting the servicer (usually the sponsor) to reduce its fees (First Union 2/24/97). All violate the true sale provision of GAAP and RAP, yet none of the events resulted in regulatory or accounting restatements that added loans back onto bank balance sheets. The recourse events in Table 1 propped up 89 domestic and three foreign securities

---

<sup>4</sup> At first glance, waiving early amortization triggers may not seem like recourse. It is important to remember, however, the waivers are initiated by the sponsors (not the noteholders) with the intent to protect noteholder value. Neither event seems to jeopardize the deal ratings and all are explicitly approved by investment bankers. Also, these changes, at the time, were meant primarily to bring older deals in line with newer deals that were being done with lower credit enhancements. Thus, the events increased noteholder returns (by preventing early amortization) while not having a noticeable impact on risk (no rating downgrade). We consider such ex post changes to the risk–return structure of the deal the essence of implicit recourse.

issues with a combined value of about \$35.5 billion, comprising almost 7.5% of the \$475 billion total public credit card asset-backed security domestic issuance reported on the Securities Data Corporation's *New Issues Database* through May 2002.

Table 1 indicates that three recourse events occurred in each of 1991 and 1993. After only one event in 1995, six occurred in 1996 and another three in 1997. The last recourse event in our sample occurred in 1998. Looking at the distribution of events, it is not surprising that by 1996 regulators and accountants began to consider more strictly imposing the true sale provisions on securitization activity.

In September 1996 the Comptroller of the Currency issued its first (of many) official opinions on the treatment of implicit recourse, threatening to bring asset pools benefiting from implicit recourse back onto bank balance sheets. However, four of our events occurred after 1996. Furthermore, in April of 2003, Chase Manhattan solicited investors to waive early amortization triggers on their credit-card-backed securities.<sup>5</sup> Thus, while regulators seem outwardly intent on stopping implicit recourse, it is still occurring.

### 3. Stock price effects of recourse

In this section we analyze the short- and long-term equity return effects associated with recourse on the recourse credit card bank sample (described previously) and a comparative benchmark non-recourse credit card bank sample.

#### 3.1. Short-term returns for the recourse credit card bank sample

We analyze equity returns around 14 recourse events involving eight of the sponsors in Table 1.<sup>6</sup> We calculate announcement period abnormal returns for firms in the recourse credit card bank sample using a standard market model,  $R_{i,t} = \alpha_i + \beta_i R_{m,t} + e_{i,t}$ , where  $R_{i,t}$  is the return on day  $t$  for the recourse announcing firm and  $R_{m,t}$  is the equally weighted CRSP index return on day  $t$ .<sup>7</sup> The announcement day is defined as day 0. The market model parameters,  $\alpha_i$  and  $\beta_i$ , are estimated over the 200-day window ending 10 days prior to the announcement (day -210 to day -10). Since our announcements generally come from newswire reports, it is possible that the news may have been released after the close of trading on the announcement day. Hence, we define the announcement period as the two-day window including the announcement day and the day following the announcement (day 0 to day 1).

<sup>5</sup> Not only was the event too late to include in our results, but Chase undertook the action on Good Friday, when markets closed early for the weekend. Footnote 4 describes why we categorize waivers as recourse events.

<sup>6</sup> Prudential was not publicly traded at the time of its recourse announcements, and we did not have an exact day for the Tandy recourse announcement. Hence, these events are excluded from the analysis.

<sup>7</sup> To control for possible bank-industry specific risk, we conducted the event study using the Philadelphia Stock Exchange's Bank Index as the market portfolio. Results were qualitatively the same.

Table 2 contains the results of the event study conducted for the recourse credit card bank sample. The two-day (day 0, 1) abnormal return is positive and large in magnitude, 1.00%.<sup>8</sup> It appears that the market reaction actually occurs on day 1, which has a positive abnormal return of 1.36%. This abnormal return is quite large and indicates that the market did not anticipate the recourse announcement. Three observations about Table 2 are important. First, four of the 14 events are associated with negative abnormal returns, suggesting that there are circumstances under which investors may view recourse in a negative light.<sup>9</sup> Second, there is no discernible time trend to the abnormal returns. The four events associated with negative abnormal returns – Citibank 1992, Household Finance November 1995, Mercantile Bank February 1996, and Sears Roebuck 1998 – do not appear clustered in any one time period, nor do abnormal returns appear changed following the OCC's September 1996 issuance limiting the ability of banks to provide support to failing credit-card-backed deals. Third, it appears that each recourse announcement conveys new information. In fact, many of the banks that have more than one recourse announcement actually have *larger* abnormal returns associated with subsequent announcements than those associated with the first recourse announcement.

### 3.2. Short-term returns for the non-recourse credit card bank sample

In the presence of asymmetric information, it is not uncommon for shareholders to infer information about the value of their company from information that comes from similar companies.<sup>10</sup> This is indicative of the transfer of information that exists between firms in similar industries. We hypothesize that a similar phenomenon may exist for recourse credit card bank sample firms. Specifically, we hypothesize that announcing implicit recourse eliminates uncertainty about the industry's willingness to provide recourse and about the value that recourse has for securitizing firms. We therefore analyze whether there exists an information transfer between recourse announcing firms and other firms that are securitizing credit card debt.

<sup>8</sup> Given the small sample sizes, statistical significance is difficult to determine. Using the cross-sectional *t*-statistic of Boehmer et al. (1991), however, we did find that the abnormal return is significant at the 1% level. Higgins and Peterson (1998) show that the performance of the cross-sectional *t*-statistic is superior to other test statistics.

<sup>9</sup> We also searched for asset-backed security return behavior around the events indicated. Out of 27 trusts (sponsored by six banks) directly affected by recourse in Table 1, we found price data on seven trusts sponsored by three banks: First Union MCCT 1A, 1B, 2A, and 2B; Prudential Bank & Trust MCCT II 1994-A; and Mercantile 1995 1A and 1B. First Union and Prudential experienced two recourse events during the period covered by the price data, allowing the analysis of 12 event/series pairs. Only two of these event/series pairs, Prudential MCCT II 1994-A in May 1996 and Mercantile 1995 1B in February 1996, showed changes to returns around the event dates. Both experienced increases in price following recourse, as would be expected. However, Prudential 1994 A did not show price effects in October 1996, nor did Mercantile 1995 1A in February 1996. Mercantile the sponsor did, however, experience negative stock price reactions in February 1996. While further analysis of price series would be interesting, data are severely lacking.

<sup>10</sup> For example, Szewczyk (1992) finds that the announcement of a seasoned equity offering by one company in an industry will create a negative price response for all companies in the industry.

Table 2  
Abnormal stock returns for credit card banks announcing recourse

Two-day announcement window abnormal returns for all events			
Announcing firm	Announcement date	Two-day (days 0,1) abnormal return	Standardized two-day abnormal return
Citibank	5/13/91	-0.0047	-0.1182
Sears Roebuck and Co.	9/11/91	0.0055	0.2322
Sears Roebuck and Co.	10/14/91	0.0292	1.2677
Citibank	3/15/93	0.0333	1.3199
Household Finance	3/31/93	0.0026	0.1102
Household Finance	11/13/95	-0.0123	-0.5120
Mercantile Bank	2/12/96	-0.0126	-0.9251
First Union	6/10/96	0.0030	0.1587
FCC National Bank	7/11/96	0.0234	1.0278
AT&T	9/9/96	0.0221	0.8687
First Union	2/24/97	0.0079	0.4059
Banc One Corp.	3/5/97	0.0313	1.4116
First Union	5/19/97	0.0191	1.1048
Sears Roebuck and Co.	5/18/98	-0.0081	-0.2574
Mean		0.0099	0.4353
Median		0.0067	0.3190
Standard deviation		0.0163	0.7429

This table contains abnormal and standardized abnormal stock returns for credit card banks that announce the provision of recourse to an outstanding credit card securitization over a two-day announcement window (the announcement day and the day after the announcement). Abnormal returns are calculated using the market model.

To test this hypothesis, we calculate abnormal returns associated with recourse announcements for a *non-recourse credit card bank sample* (other banks that securitized credit card debt and did not provide recourse). For each year represented in the recourse sample, we identify all securitizing credit card sponsors listed in Faulkner & Gray's *Card Industry Directory* (various years) that did not provide recourse at *any* time during the sample period. In the event that some of these banks did not report securitizations to Faulkner & Gray, their issuance was confirmed using Lexis–Nexis and the Securities Data Corporation's *New Issues Database* and (far less detailed) call report data where available. Members of the non-recourse credit card bank sample for each year are identified Table 3.<sup>11</sup>

To calculate abnormal returns for the non-recourse credit card bank sample, we use the portfolio approach suggested by Szewczyk (1992). For each recourse announcement, we create an equally weighted portfolio of returns for all firms in the non-recourse credit card bank sample over the period from -210 days prior to

<sup>11</sup> The dollar amount of securitizations outstanding at the 92 banks ranges from more than \$27 billion for MBNA, representing 80% of MBNA's total (both on- and off-balance-sheet) credit card loans, to just under \$39 million at American General Financial Corp., representing about 7% of American General's credit card loans. Average dollar amount of securitizations outstanding at the 92 banks is about \$4 billion, and median volume is about \$987 million. The average percent of total credit card loans securitized among these 92 banks is 53% and the median is 47%.

Table 3  
Non-recourse credit card bank sample composition

Name	1991	1993	1995	1996	1997	1998
Advanta NB, USA	×	×	×	×	×	
American Express Centurion Bank				×	×	×
American General Financial Center			×	×	×	
Bank of America, NA		×		×	×	×
Bank of New York, DE	×	×	×	×		
Capital One Bank			×	×	×	×
Carolina First Bank			×	×	×	×
Chase Manhattan Bank USA, NA	×	×	×	×	×	×
Chemical Bank	×	×				
First Commerce Bancshares				×	×	
First USA Bank		×	×	×	×	
Firststar						×
Fleet National Bank						×
MBNA America, NA	×	×	×	×	×	×
Mellon Bank Corp.			×	×	×	×
National City Bank	×	×	×	×	×	×
NationsBank, NA	×	×	×	×	×	×
Norwest Bank IA, NA	×	×	×			
Peoples Bank		×	×	×	×	×
Providian National Bank			×	×	×	
Signet Bank	×	×	×	×	×	
Valley National Bank	×					
Wachovia Bank, NA				×	×	×
Wells Fargo Bank				×		×
Zions First NB		×	×	×	×	×

This table contains a list of all firms that issued credit-card backed debt, excluding the sample firms, in each year that a recourse announcement was made.

the announcement to 10 days after the announcement. Using the portfolio returns, market model parameters (described above) are estimated over the period from –210 days to –10 days. The resulting parameters are used to predict returns over the period –10 days prior the announcement to 10 days after. The difference between actual and predicted returns in this period is the abnormal return. Although we do not have return data for Prudential (a non-public company) itself, we have an exact announcement date for one of the Prudential recourse announcements. Including that event in the analysis raises the number of events analyzed to 15.

Table 4 contains the results of the non-recourse credit card bank sample event study. We find positive abnormal returns (0.66%) for the non-recourse banks around the recourse announcement (days 0 and 1).<sup>12</sup> Such a large abnormal return for the industry is rather surprising, suggesting that the market places a great deal of importance on the recourse announcement. Similar to the results found for the recourse sample, it is clear that the results are not driven by outliers. Ten of the 15 events are associated with positive abnormal returns for the non-recourse banks. Only

<sup>12</sup> This return is found to be significant at the 1% level.

Table 4

Abnormal stock returns associated with an announcement of recourse for non-recourse credit card ABS sponsors

Two-day announcement window abnormal returns for non-recourse credit card banks			
Announcing firm	Announcement date	Two-day (days 0,1) abnormal return for non-recourse providing credit card securitizers	Standardized two-day abnormal return for non-recourse providing credit card securitizers
Citibank	5/13/91	0.0027	0.1027
Sears Roebuck and Co.	9/11/91	-0.0063	-0.2845
Sears Roebuck and Co.	10/14/91	0.0266	1.4457
Citibank	3/15/93	-0.0005	-0.0388
Household Finance	3/31/93	-0.0041	-0.3218
Household Finance	11/13/95	-0.0026	-0.2668
Mercantile Bank	2/12/96	0.0063	0.6010
First Union	6/10/96	-0.0004	-0.0346
FCC National Bank	7/11/96	0.0199	1.8446
AT&T	9/9/96	0.0152	1.4498
Prudential Bank and Trust	10/21/96	0.0015	0.1386
First Union	2/24/97	0.0101	0.9410
Banc One Corp.	3/5/97	0.0114	1.0596
First Union	5/19/97	0.0109	0.8630
Sears Roebuck and Co.	5/18/98	0.0087	0.6577
Mean		0.0066	0.5438
Median		0.0063	0.6010
Standard deviation		0.0093	0.7068

This table contains two-day announcement period (the announcement day and the day after the announcement) abnormal and standardized abnormal stock returns for all non-recourse providing banks issuing credit card backed debt. Abnormal returns are calculated for the portfolio of all firms identified as credit-card-backed debt sponsors at the time of a support announcement. The market model is used to calculate abnormal returns.

one of the events that generated large negative abnormal returns for the recourse sample (Household, 1995) is associated with negative abnormal returns for non-recourse banks. However, the magnitude of this and the other negative reactions among non-recourse credit card banks is small, averaging  $-0.28\%$ , compared with the positive reactions, which average  $1.13\%$ . Again, abnormal returns accompanying recourse remain positive after the 1996 OCC announcement of increased regulatory stringency. Thus, we conclude that recourse announcements convey significant positive information valuable to all credit card securitizing banks. It may be that the market views the allowance of recourse as tacit approval by regulators, which, in turn, creates benefits for all securitizing banks.

#### 4. Long-run stock price and operating performance effects of recourse

Section 3 suggests that the announcement of recourse by credit card banks has a substantial impact on both recourse credit card banks and non-recourse credit card

banks. It is possible, however, that the market does not fully anticipate or properly value the information contained in important event announcements. In such cases, the effects associated with the announcement would be mitigated over time. Thus, the events may also have an impact on the long-run stock price and operating performance of the announcing firms.<sup>13</sup> We are interested in determining if such post-announcement effects exist for our recourse credit card bank sample firms.

We are also interested in determining why some banks provide recourse and others do not. An obvious reason for providing recourse is simple necessity. It may be that the banks in our sample are simply performing very poorly relative to other banks and must provide recourse as a means to keep their issues afloat. Thus, in this section we examine long-run pre- and post-announcement stock price and operating performance of recourse credit card bank sample firms.

#### 4.1. Matching samples for long-term comparisons

We use matching samples to determine if long-run performance among the recourse credit card bank sample firms is substantially different from that of other firms. Similar to other studies, our study creates matching samples by identifying firms comparable to each announcing firm. We identify matching firms using two methodologies. First, we match recourse credit card bank sample firms with others using a procedure similar to that of Loughran and Ritter (1997). According to this procedure, each firm in the recourse credit card bank sample is paired with another firm listed on the Compustat database based on SIC code, asset size, and book-to-market equity ratio.<sup>14</sup> Potential matching firms have the same four-digit SIC code as the announcing firm and have an asset size between 25% and 200% of the announcing firm in the year of the recourse announcement. From these potential firms, we choose as matching firms those that have the closest book-to-market equity ratio to each recourse credit card bank sample firm in the year of the recourse announcement. We call the resulting sample the *size and book-to-market equity matched sample* (SBEM sample).

The second matching sample is constructed by pairing each firm in the recourse credit card bank sample with its closest counterpart in the non-recourse credit card bank sample (described in Section 3.2) on the basis of outstanding securitization volume and portfolio size in the year of the recourse announcement. We call this the *credit card issue size matched sample* (CCISM sample).

One problem that we encounter in examining long-run operating performance is the presence of multiple events occurring within a short period of time. Following the methodology of Loughran and Ritter (1997), we exclude subsequent recourse announcements occurring during the two years following a recourse announcement

---

<sup>13</sup> For example, Loughran and Ritter (1995) find firms that announce seasoned equity offerings experience stock price declines, relative to a matching sample of similar firms, for several years after the announcement. Loughran and Ritter (1997) find that the operating performance of firms announcing a seasoned equity offering also declines, relative to a matching sample, post-announcement.

<sup>14</sup> Barber and Lyon (1997) suggest including the book-to-market equity ratio as a matching variable.

Table 5  
Matched sample composition

Recourse provider	Event date	Industry, size, and book-to-market matched sample (SBEM sample)	Credit card bank issue size matched sample (CCISM sample)
Citigroup	5/13/91	Bank of America	Chase
Sears	9/11/91	Wal Mart	Bank of New York
Household Int'l	3/31/93	Beneficial	Advanta
Tandy	8/1/93	Circuit City	Charming Shoppes
Mercantile	2/12/96	Compass	National City Corp
First Union	6/10/96	KeyCorp	Peoples Bank
First Chicago	7/11/96	BankBoston	Chase
AT&T	9/9/96	Verizon	Capital One
Bank One	3/5/97	FleetBoston	Bank of America
Sears	5/18/98	JC Penny	MBNA

This table contains a listing of the firms used as matches for those firms providing recourse. Matching firms were selected using two procedures. First, matching firms were chosen based on industry, asset size, and book-to-market equity ratio (the SBEM matching sample) based on a procedure similar to that of Loughran and Ritter (1997). Second, matching firms were selected based on credit-card-backed debt issue size (the CCISM matching sample).

in the sample.<sup>15</sup> Thus, the sample used for the examination of long-run performance contains 10 recourse-announcing firm observations.<sup>16</sup> Table 5 lists the recourse credit card bank sample firms and the selected matching companies based on the two selection criteria.

#### 4.2. Long-term returns for the recourse credit card bank sample

To examine the long-run stock price performance of recourse announcing banks, we compute buy and hold returns for one year before the recourse announcement and for two years after the recourse announcement. We calculate abnormal long-run returns for the recourse announcing firms using both the SBEM sample and CCISM sample as benchmark portfolios.

Table 6 contains median buy and hold returns for the recourse credit card bank sample firms, the SBEM sample firms, and the CCISM sample firms. One year prior to the announcement, seven of the 10 recourse announcing firms have returns lower than those in the size and book-to-market equity matched sample and nine of 10 recourse announcing firms have returns lower than those in the issue size matched sample. Thus, it appears as if recourse announcing bank performance may lag that of similar companies. This suggests recourse providing firms may act in response to poor performance. This poor performance appears transient, however. In the year after the recourse announcement, only five of the 10 recourse announcing firms have

<sup>15</sup> Given data limitations due to mergers, we examine only stock price and operating performance in the two years after a recourse announcement; thus, we screen only for events occurring within two years.

<sup>16</sup> Because of the small sample size, statistical tests are not reported.

Table 6  
Holding period returns for recourse announcing and matching firms

	Holding period		
	One year pre-announcement	One year post-announcement	Two years post-announcement
Recourse announcing firms	0.2088	0.2918	0.9001
Size and book-to-market equity matched firms (SBEM Sample)	0.3667	0.3298	0.4065
Credit card issue size matched firms (CCISM Sample)	0.3988	0.4646	0.7870

This table contains holding period returns for recourse announcing firms, size and book-to-market equity matched firms, and credit card issue size matched firms. Returns are calculated for one-year pre-announcement, one-year post-announcement, and two-year post announcement holding periods. Median holding period returns for recourse announcing firms, size and book-to-market equity matched firms, and credit card issue size matched firms.

returns lower than those in the size and book-to-market equity matched sample and seven of the 10 recourse announcing firms have returns lower than those in the issue size matched sample. By two years after the recourse announcement, recourse firms outperform the matching firms. Eight of 10 recourse announcing firms outperform their size and book-to-market equity matched counterparts, and six of 10 recourse firms outperform their issue size matched counterparts. Thus, performance improves after the recourse announcement, suggesting that providing recourse does not result in systematic long-term stock price performance declines among our recourse credit card bank sample firms.

#### 4.3. Long-run operating performance

In measuring long-run operating performance we examine five operating performance ratios: EBITDA to assets, profit margin, return on assets, EBITDA to sales, and return on equity.<sup>17</sup> All operating performance data come from the Compustat database. We define year 0 as the fiscal year in which the recourse announcement occurs, and we examine operating performance over a two-year window before and after the recourse announcement (fiscal years -2 through +2). Additionally, we examine the change from fiscal year -2 to +1 and from +1 to +2 for the differences between the recourse credit card bank sample firm and matching firm ratios.

Median operating performance results appear in Table 7. Panels A, B, and C contain summary median operating performance measures for the recourse credit card bank sample firms, the SBEM sample firms, and the CCISM sample firms. In general, it again appears that the operating performance of the recourse credit card bank

<sup>17</sup> Sales is Compustat item 12, Sales-Net, the same item number used by Loughran and Ritter (1997). For banks, this item includes total current operating revenue and net pretax profit or loss on securities sold or redeemed.

Table 7

Median operating performance measures for recourse announcing firms and matching firms

Fiscal year relative to support year	EBITDA/assets	Profit margin	Return on assets	EBITDA/sales <sup>a</sup>	Return on equity
<i>Panel A: Recourse credit card bank sample median operating performance measures</i>					
-2	0.0456	0.0524	0.0136	0.2612	0.1558
-1	0.0395	0.0422	0.0101	0.2340	0.1341
0	0.0424	0.0829	0.0116	0.2745	0.1356
1	0.0351	0.0853	0.0120	0.2589	0.1599
2	0.0398	0.0881	0.0155	0.2809	0.1757
<i>Panel B: Size and book-to-market equity matched (SBEM) sample median operating performance measures</i>					
-2	0.0660	0.0798	0.0110	0.3144	0.1587
-1	0.0597	0.0959	0.0129	0.2878	0.1707
0	0.0582	0.0989	0.0147	0.3166	0.1637
1	0.0572	0.0904	0.0137	0.3283	0.1766
2	0.0733	0.0939	0.0124	0.3324	0.1549
<i>Panel C: Credit card issue size matched (CCISM) sample median operating performance measures</i>					
-2	0.0321	0.1136	0.0121	0.2860	0.1670
-1	0.0329	0.1210	0.0128	0.2978	0.1667
0	0.0324	0.1228	0.0131	0.3163	0.1554
1	0.0338	0.1126	0.0130	0.3279	0.1691
2	0.0342	0.1327	0.0125	0.3559	0.1535
<u>Time Period</u>					
<i>Panel D: Median change in the ratios of recourse credit card bank sample performance measures relative to the size and book-to-market equity matched (SBEM) sample</i>					
-2 to +1	0.0002	-0.0326	-0.0039	-0.0254	-0.0324
+1 to +2	0.0093	0.0212	0.0061	0.0255	0.0312
<i>Panel E: Median change in the ratios of recourse credit card bank sample performance measures relative to the credit card issue size matched (CCISM) sample</i>					
-2 to +1	-0.0081	-0.0398	-0.0044	-0.0463	0.0054
+1 to +2	0.0047	0.0197	0.0063	0.0167	0.0413

Panels A, B, and C contain median operating performance measures for recourse announcing firms, size and book-to-market equity matched firms, and credit card issue size matched firms. Panels D and E contain the change from fiscal year -2 to +1 and from +1 to +2 in the announcing firm ratios relative to the size and book-to-market equity matched firms and the issue size matched firms, respectively. There are 10 announcing firm observations available in years -2 through +1 and 9 available in year +2.

<sup>a</sup>Sales is Compustat item 12, Sales-Net, the same item number as used by Loughran and Ritter (1997). For banks, this item includes total current operating revenue and net pretax profit or loss on securities sold or redeemed.

sample firms deteriorates prior to the support announcement and improves after the support announcement.

The general pattern of results in Panels A, B, and C is confirmed in examining changes in performance over time. Panels D and E of Table 7 contain median operating performance changes for the recourse announcing firms relative to the SBEM and CCISM matching samples, respectively. Recourse announcing firms show a

Table 8  
Comparison of issue attributes before and after recourse

Comparison deals: Before support After support	Comparison deal issue date	A-class pool size (\$ thou- sands)	A-class support	A-class coupon	B-class pool size (\$ thou- sands)	B-class support	B-class coupon	Tertiary credit support	Prior issue fre- quency <sup>a</sup> (days)	Time between before and after issues
<i>Sears Roebuck, 19910911</i>										
Sears Credit Account Tr 1991-C	07/11/1991	500.0	nr	8.65	na	na	na	nr	75	77
Sears Credit Account Tr 1991-D	09/26/1991	500.0	nr	7.75	na	na	na	nr		
<i>Sears Roebuck, 19911014</i>										
Sears Credit Account Tr 1991-D	09/26/1991	500.0	nr	7.75	na	na	na	nr	75	411
Sears Credit Account Master Tr	11/10/1992	1000.0	0.085	5.90	na	na	na	nr		
<i>Citibank NA (Citigroup Inc), 19910513<sup>b,c,d</sup></i>										
Standard Credit Card Tr 1990-7	08/20/1990	1250.0	0.170	8.88	155.0	0.060	9.13	6% LOC	49	290
Standard Credit Card Master Tr	06/06/1991	625.0	0.180	7.88	78.0	0.070	8.25	7% CCA		
<i>Citibank NA (Citigroup Inc), 19930315<sup>e</sup></i>										
Standard Credit Card Master Tr	09/24/1992	1250.0	0.110	3-M LIBOR + 30	80.0	0.050	3-M LIBOR + 62.5	5% CCA	86	336
Standard Credit Card Master Tr	08/26/1993	750.0	0.110	5.95	48.0	0.050	6.15	5% CCA		
<i>Household, 19930331</i>										
Household Credit Card Tr 1992-1	12/22/1992	357.0	0.160	1-M LIBOR + 25	68.0	0.100	6.25	CCA	272	1,081
Household CC Master Tr 1995-1	12/08/1995	500.0	0.125	1-M LIBOR + 17	24.3	0.090	1-M LIBOR + 35	9% CIA		
<i>Household International Inc, 19951106</i>										
Private Label CC Master Tr II 1994-2	11/09/1994	307.5	0.180	7.80	22.5	0.120	6.70	12% CIA	333	2,465
Household Private Label CC 2001-1	08/09/2001	400.0	0.156	1-M LIBOR + 14	58.3	0.029	1-M LIBOR + 45	15.61% OC		
<i>First Chicago NBD Corp, 19960711</i>										
First Chicago Master Tr II 95-P	06/15/1995	500.0	0.140	1-M LIBOR + 18	na	na	na	12.5% CIA/ 1% CCA	181	456
First Chicago Master Tr II 96-Q	09/13/1996	900.0	0.140	1-M LIBOR + 13	na	na	na	12.5% CIA/ 1% CCA		

*AT&T Corp., 19960909<sup>c</sup>*

AT&TUniversal Master Tr 1996-2	06/24/1996	850.0	0.156	3-M LIBOR + 7	80.0	0.070	3-M LIBOR + 21	7% CIA	102	317
AT&TUniversal Master Tr 1996-3	09/10/1996	850.0	0.156	3-M LIBOR + 10	80.0	0.070	3-M LIBOR + 30	7% CIA		
AT&TUniversal Master Tr 1997-1	05/07/1997	850.0	0.150	3-M LIBOR + 9	80.0	0.070	3-M LIBOR + 28	7% CIA		

*BANK ONE Corp., 19970305*

Banc One Cr Card Master Tr 1996-A	03/20/1996	465.0	0.170	1-W LIBOR + 22	35.0	0.100	1-W LIBOR + 34.5	10% CCA	168	490
First USA CC Master Tr 1997-5	07/23/1997	650.0	0.170	1-M LIBOR + 14	58.7	0.095	1-M LIBOR + 33	9.5% CIA		

*Sears Roebuck, 19980518<sup>c</sup>*

Sears Credit Account Master Tr 97-1	07/21/1997	500.0	0.115	6.20	22.5	0.070	6.40	7% CIA	108	463
Sears Credit Account Master Tr 98-1	05/19/1998	500.0	0.156	5.80	35.3	0.090	6.00	9% CIA		
Sears Credit Account Master Tr 98-2	10/27/1998	450.0	0.150	5.25	32.0	0.090	6.30	9% CIA		

This table contains credit card ABS deal attributes from those deals prior and subsequent to recourse events. The italicized headings above the blocks of rows indicate the issuers and support event dates. All data are from the Securities Data Corp. *New Issues Database*.

*Note:* Mercantile, Prudential and Tandy did not have any other comparison issues before or after the recourse event. First Union's only issues were their 1996-1 and 1996-2, both of which required recourse. 'na' indicates data field is not applicable to issue.

'nr' indicates we were not able to find data relating to a relevant field.

<sup>a</sup> Prior Issue Frequency is the average time between issues for as many as the ten prior issues brought to market. For Household Private Label, we have evidence of only one deal prior to that we use as the "Before" deal.

<sup>b</sup> The prior Citigroup deal immediately before the recourse event (1990-8B, Oct 11, 1990) was a single-tier deal that was not typical of prior issues. We included the next previous multi-tier deal for comparison instead. Using this deal adds 60 days to the issuance interval between before and after.

<sup>c</sup> The next deal went to market the day after the recourse event. We included the next deal after that for comparison. This adjustment adds 23 days to the Citi issuance interval between before and after, 239 days to the AT&T interval, and 161 days to the Sears issuance interval.

<sup>d</sup> Tertiary credit support obtained from 1990-6, June 21, 1990.

<sup>e</sup> The next Citigroup deal immediately after the recourse event (1993-1, August 4, 1993) was a single-tier deal that was not typical of prior or subsequent issues. We included the next multi-tier deal for comparison instead. This adjustment adds 22 days to the issuance interval between before and after.

Table 9  
Comparison of issue attributes before and after recourse, CCISM firms

Recourse firm, recourse date and comparison CCISM deals	Deal issue date	A-class pool size (\$ thousands)	A-class support	A-class coupon	B-class pool size (\$ thousands)	B-class support	B-class coupon	Tertiary credit support	Prior issue frequency (days)	Time between before and after issues
<i>Citigroup, 5/13/1991</i>										
Chase Manhattan Cred Tr	03/12/1991	750,000	nr	8.45%	na	na	na	nr	88	94
Chase Manhattan Cred Tr 1991-1	06/14/1991	1,000,000	11.0%	8.75%	na	na	na	11% CCA		
<i>Sears, 9/11/1991</i>										
BNY Master Credit Card Trust	03/28/1991	750,000	13.0%	7.95%	na	na	na	13% CCA	na	175
BNY Master Credit Card Trust	09/19/1991	600,000	13.0%	7.10%	na	na	na	13% CCA		
<i>Sears, 10/14/1991</i>										
BNY Master Credit Card Trust	09/19/1991	600,000	13.0%	7.10%	na	na	na	13% CCA	na	na
na		na	na	na	na	na	na	na		
<i>Citigroup, 3/15/1993</i>										
Chase Manhattan Credit Card Tr	02/25/1992	750,000	11.0%	7.40%	na	na	na	11% CCA	110	1107
Chase Manhattan CC Mas Tr 95-1	03/08/1995	855,000	16.0%	1 moL + 0.13	50,000	11.0%	1 moL + 0.285	11% CCA		
<i>Household Int'l, 3/31/1993</i>										
Advanta Credit Card Master Tr	08/20/1992	250,000	50.0%	5.95%	250,000	nr	private	nr	230	342
Advanta Credit Card Master Tr	07/28/1993	400,000	53.0%	1 moL + 0.23	na	na	na	13% CCA		
<i>Household Int'l, 11/6/1995</i>										
Advanta Crdt Cd Mr Tr 1995-D	07/19/1995	519,000	17.5%	1 moL + 0.19	30,000	11.5%	1 moL + 0.32	11.5% CIA	178	90
Advanta Credit Card Master	11/14/1995	801,000	13.8%	6.05% 1 moL + 0.19 <sup>a</sup>	44,600	7.8%	1 moL + 0.30	5.75% CIA□2% CCA		
<i>First Union, 6/10/1996</i>										
People's Bank CCMT 1995-1	03/21/1995	379,000	14.5%	1 moL + 0.20	21,000	9.0%	1 moL + 0.35	9% CCA	145	458
People's Bank CCMT 1996-1	06/21/1996	379,000	14.5%	1 moL + 0.15	21,000	9.0%	1 moL + 0.30	9% CCA		

<i>First Chicago, 7/11/1996</i>											
Chase Manhattan Credit 1996-3, 4 <sup>b</sup>	06/12/1996	957,200	14.0%	7%	42,800	8.0%	7%	8% CIA	215	257	
Chase Manhattan CC Tr 1997-1	02/24/1997	1,150,000	16.0%	1 moL + 0.09	95,000	9.0%	1 moL + 0.29	9% CIA			
<i>AT&amp;T Universal, 9/9/1996</i>											
Capital One Bank Series 1995-3	09/07/1995	840,000	20.0%	1 moL + 0.15	109,200	7.0%	private	7% CIA	114	353	
Capital One Master Tr 1996-2	11/25/1996	600,000	20.0%	1 moL + 0.10	54,000	11.0%	private	11% CIA			
<i>First Union, 2/24/1997</i>											
People's Bank CCMT 1996-1	06/21/1996	379,000	14.5%	1 moL + 0.15	21,000	9.0%	1 moL + 0.30	9% CCA	458	279	
People's Bank CCMT 1997-1	03/27/1997	425,000	15.0%	1 moL + 0.12	33,750	8.3%	1 mL + 0.32	8.25% CIA			
<i>Bank One, 3/5/1997</i>											
BA Master CC Trust 1996-A	07/15/1996	427,500	14.5%	1 moL + 13	32,500	8.0%	1 moL + 26	8% CIA	na	325	
BankAmerica CCMT 97A	06/05/1997	648,800	13.5%	1 moL + 11	41,300	8.0%	1 moL + 29	8% CIA			
<i>First Union, 5/19/1997</i>											
People's Bank CCMT 1997-1	03/27/1997	425,000	15.0%	1 moL + 0.12	33,750	8.3%	1 mL + 0.32	8.25% CIA	279	181	
People's Bank CCMT 1997-2	09/24/1997	425,000	15.0%	1 moL + 0.13	33,750	8.3%	1 mL + 0.33	8.25% CIA			
<i>Sears, 5/18/1998</i>											
MBNA Master CC Trust 1997-N	11/19/1997	765,000	16.0%	3 moL + 7	67,500	8.0%	3 moL + 23	8% CIA	75	103	
MBNA Master CC Trust 1998-C	06/10/1998	637,500	16.0%	1 moL + 8	56,250	8.0%	1 moL + 25	8% CIA			

This table contains credit card ABS deal attributes from those deals prior and subsequent to recourse events for firms matched on credit-card backed debt issue size. All data are from the Securities Data Corp. *New Issues Database*.

'na' indicates data field is not applicable to issue.

'nr' indicates we were not able to find data relating to a relevant field.

Mercantile and Tandy CCISM matches did not have deals with sufficient comparison data.

<sup>a</sup> Tranche is half fixed, half floating.

<sup>b</sup> Reported numbers are the average of 1996-3 and 1996-4.

decline in performance around the recourse announcement (from years  $-2$  to  $+1$  relative to the announcement) for all ratios except EBITDA/assets, relative to the SBEM matching sample, and show a decline in performance around the recourse announcement for all ratios except the return on equity, relative to the CCISM matching sample. Comparison of the operating performance of recourse announcing firms to the SBEM and the CCISM matching firms shows that announcing firms have an increase in operating performance after the recourse announcement (years  $+1$  to  $+2$  relative to the announcement) for all of the performance measures examined. These results are again similar to those found for long-run stock returns. Performance of the recourse credit card bank sample firms was poor around the announcement but improved post-announcement. Again, this suggests that firm-specific factors may have played a role in the need to provide recourse but the recourse provision did not significantly affect the performance of the firms that provided recourse.

## **5. Subsequent loan sale terms and conditions**

Recourse is an indication that some aspect of the securitization was unanticipated, whether that be lower than expected credit quality, legal terms regarding the mechanics of disbursements, or regulatory action. Hence, while the bank or parent firm may not have suffered, subsequent deals may be structured in ways that help ensure investors avoid the default and reinvestment risks that accompany early amortization. Thus, we examine dimensions of pool size, support, and coupons for both A and B tranches, the underlying (tertiary) credit support, the average issue frequency prior to support, and the time between issues before and after the support event for our recourse credit card bank sample. For comparison we examine the same dimensions for the CCISM sample firms. This will allow us to determine if any observed changes in the recourse sample are firm specific or are associated with overall changes in the credit card securitization market.

### *5.1. Changes in securitization terms for recourse credit card bank sample firms*

Table 8 lists attributes for recourse credit card bank sample deals brought to market before and after 10 of the support events listed in Table 1. The events relating to Mercantile, Prudential, and Tandy did not have any other comparison issues either before or after the recourse event. First Union's only issues were its 1996-1 and 1996-2, both of which required recourse. We hypothesize that, following recourse, ABS investors might expect increased enhancement for the pool to receive a desired rating, an increased coupon to compensate for higher unexpected risk, or higher levels of tertiary (C-class) credit enhancement for the entire deal.

Few of the comparisons in Table 8 illustrate evidence consistent with this hypothesis. A-class and B-class enhancements rise in only one of the deal comparisons – that associated with the Sears Roebuck May 18, 1998, support event. In this case, the A-class enhancement level rose from 11.5% before support to over 15% after,

and the B-class support rose from 7% to 9%. Following the Household International November 13, 1995, support event the amount of enhancement rose, but the sponsor switched to a different type of enhancement, from a 12% collateral invested amount (CIA) to a 15.61% overcollateralization (OC). The other events exhibit the same or sometimes decreased support levels after the event.

Coupons are also typically the same or lower after the support event. The only increase evident in Table 8 is that for B-class coupons before and after the AT&T Corp. September 9, 1996, event.

All in all, it appears that few recourse events are associated with pool enhancement, tertiary enhancement, or coupon changes that could be associated with investor concern.

Market access, however, may pose an additional means by which investors react. The last two columns in Table 8 compare the average time between issues prior to recourse and the time between the before and after issues around the support event for our group of sponsors. Excepting the Sears Roebuck September 11, 1991, support event, which was followed closely by another support event for that sponsor, the time lapse between issues around the support event averages over *four times* the interval between issues prior to the event. In two cases, Sears Roebuck May 18, 1998, and AT&T Corp. September 9, 1996, sponsors took deals to market the day after support. In both cases, however, these sponsors waited a substantial period – 411 days for Sears (308% of the average issuance interval) and 317 days for AT&T (310% of the average issuance interval) – before taking their *next* deals to market. Hence, although it appears sponsors eventually return to the market at terms similar to those prior to support, they often do not do so on the same schedule as prior to providing support.

### 5.2. Changes in securitization terms for CCISM sample firms

Table 9 illustrates loan sale terms for 13 credit card issue size matching (CCISM) sample firms around each recourse credit card sample firm's related recourse announcement. Again, there is scant evidence of change in A- or B-tranche composition or pricing changes associated with recourse events.

Furthermore, average issuance intervals around recourse increase only about 2.3 times over the pre-recourse interval for the CCISM firms in Table 9 compared with over four times the pre-recourse interval for recourse credit card bank sample firms in Table 8. A lot of this increase is driven by one outlier, Chase, around Citigroup's March 1993 recourse announcement. In that case, Chase's issue interval increases over 10 times its pre-recourse interval. Excluding that outlier from the sample reduces the average increase for CCISM sample firms to 1.46 times the pre-recourse interval. Hence, the time between issuance does not seem to increase around recourse events for CCISM sample firms as much as for recourse credit card bank sample firms. Thus, the increased time to issuance observed for the recourse bank sample does not appear to be associated with a marketwide effect, and it appears that, as with the commercial paper market, the penalty for difficulties that may lead to recourse is loss of market access.

## 6. Summary and conclusions

This paper began by observing that securitization is believed to pose risks to sponsors of the underlying collateral. These risks are believed to be especially acute with revolving collateral, like credit card loans, because of the propensity for recourse provided by the sponsor. The paper documents 17 discrete recourse events that occurred during the 1990s and examines the effects of recourse to the sponsor by examining short- and long-term stock returns, long-term operating performance, and follow-on terms of securitization.

The paper demonstrates that sponsor stock prices, on average, increase in both the short and long run following recourse. Long-run median operating performance also improves *ex post*. Despite improvements in stock returns and operating performance for the sponsor following recourse, it appears sponsors will face a penalty for unexpected performance shortfalls in their securitizations. Although terms of the securitizations (coupons, composition, credit enhancements) for the most part remain consistent when firms return to market after recourse, the paper documents that firms providing recourse may face long delays before returning to market. Hence, much like with commercial paper, although there appears to be little time series variation in the contractual terms of securitizations, firms face market exclusion if they demonstrate an inability to sell sound investment-grade paper.

The results outlined above should not be construed as favoring recourse. While positive results following recourse suggest that sponsors act rationally, recourse still violates FASB 140 and regulatory restrictions governing the true sale of assets. Furthermore, recourse represents an implicit contractual provision that is not disclosed to the sponsor's investors. However, the results presented in this paper suggest that recourse can be valuable and can benefit the sponsor and that there may be a gray area between treating assets as "sold" and taking them off balance sheets and treating them as "retained" and keeping them on. Clarifying this distinction and measuring, analyzing, and parameterizing that gray area are therefore important topics for future research.

## Acknowledgements

The authors thank Mitch Berlin, Peter Burns, Charles Calomiris, Loretta Mester, Jim Moser, Ronald Watson, and the journal editor and referee for comments and criticism on earlier drafts. Mason acknowledges support from Drexel University's Bennett S. LeBow College of Business Summer Research Grant Program, the Federal Reserve Bank of Philadelphia's Payment Cards Center, and the Wharton Financial Institutions Center. An earlier draft of this paper was presented at the 2002 Financial Management Association meetings and the 2002 Eastern Finance Association meetings. The views expressed in this paper are those of the authors and do not necessarily represent the views of the Federal Reserve Bank of Philadelphia or the Federal Reserve System.

## References

- ABC's of Credit Card ABS, 1997. Fitch Investors Service, New York.
- Barber, B., Lyon, J., 1997. Detecting *long*-run abnormal stock returns: The empirical power and specification of test statistics. *Journal of Financial Economics* 43, 341–372.
- Boehmer, E., Musumeci, J., Poulsen, A.B., 1991. Event study methodology under conditions of event-induced variance. *Journal of Financial Economics* 30, 253–272.
- Calomiris, C.W., Mason, J.R., 2003. Credit card securitization and regulatory arbitrage. Federal Reserve Bank of Philadelphia Working Paper #03–07, April.
- Card Industry Directory, various years. Faulkner & Gray, New York.
- Higgins, E.J., Peterson, D.R., 1998. The power of one and two sample *t*-statistics given event-induced variance increases and non-normal stock returns: A comparative study. *Quarterly Journal of Business and Economics* 37, 27–49.
- Jones, D., 2000. Emerging problems with the Basel Capital Accord: Regulatory capital arbitrage and related issues. *Journal of Banking and Finance* 24, 35–58.
- Loughran, T., Ritter, J.R., 1995. The new issues puzzle. *Journal of Finance* 50, 23–51.
- Loughran, T., Ritter, J.R., 1997. The operating performance of firms conducting seasoned equity offerings. *Journal of Finance* 52, 1823–1850.
- Moody's, 1997. The costs and benefits of supporting 'troubled' asset-backed securities: Has the balance shifted?.
- Szewczyk, S.H., 1992. The intra-industry transfer of information inferred from announcements of corporate security offerings. *Journal of Finance* 47, 1935–1945.