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**WHAT IS THE VALUE OF RECOURSE TO ASSET BACKED
SECURITIES? A CLINICAL STUDY OF CREDIT CARD BANKS**

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Abstract

The present paper uses data from revolving credit card securitizations to show that, conditional on being in a position where implicit recourse has become necessary and actually providing that recourse, recourse to securitized debt may benefit short- and long-term stock returns, and long-term operating performance of sponsors. The paper suggests that this result may come about because those sponsors providing the recourse do not seem to be extreme default or insolvency risks. However, sponsors providing recourse do 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. Therefore, although in violation of regulatory guidelines and FASB140, recourse may have beneficial effects for sponsors by revealing that the shocks that made recourse necessary are transitory.

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, 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,¹ whether the sponsor is a bank originating loans or a nonbank 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 like credit card loans) hinge upon an *implicit* understanding that recourse may be provided by the sponsor. Such understandings exist

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

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. The present paper examines the effects of these revelations on the sponsor. On the face of it, one might expect that revealing previously unreported contingent liabilities could heighten asymmetric information about firm conditions, resulting in poor short- and long-term stock price performance, poor long-term financial performance, and reduced proceeds from subsequent loan sales. However, 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, *improved* long-term financial performance, and *similar* proceeds from subsequent loan sales.

The rest of the paper proceeds by describing in Section I 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 II examines short-term stock price effects around recourse announcements for recourse announcing firms and non-recourse announcing firms. Section III examines long-term stock price and financial performance around recourse announcements. Section IV examines the riskiness of sponsors that provide recourse. Section V

examines subsequent loan sale proceeds and provisions around recourse announcements. Section VI summarizes and concludes.

I. Credit Card Banks and Implicit Recourse

A. Why credit card banks?

There are four key stages of the securitization process.² 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

² For additional background, see the *ABC’s of Credit Card ABS* and Moody’s 1997.

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 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. The latter is referred to as *early amortization*. 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.

B. 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 to 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).³

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 is 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,

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

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.

The magnitude of securitizations relative to on-balance-sheet assets in Table 1 suggests that banks relying on securitization should seek to avoid the possibility of prolonged on-balance-sheet funding. The firms and bank holding companies in Table 1 provided recourse to existing securitizations to avoid that fate.

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 (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 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 Corp. *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. At that time, the industry – if not regulators themselves – already recognized that recourse was a *de facto*, if not a *de jure*, violation of the true sale.

In September 1996 the Comptroller of the Currency issued its first official opinions on the treatment of implicit recourse, threatening to bring asset pools benefiting from implicit recourse back onto bank balance sheets. A March 31, 1997, article from *Asset Sales Report* put the issue most directly and succinctly. In that article, Lawrence W. Cohn, a senior vice president of equity research at PaineWebber, opined:

We have long been of the opinion that credit card securitizations are financing mechanisms rather than bona fide sales of assets... We certainly have no problem with banks using the securitization markets as a source of funding. But pretending that the assets have really been sold is another matter. Banks want sales treatment because they don't have to put up capital against securitized assets, and they don't have to post loss reserves either. But clearly the risks of ownership have not passed to buyers of securitized paper. In theory, every securitization is supposed to stand on its own. The issuer puts up sufficient excess receivables or in some other fashion enhances the pool as to garner investor confidence. In fact, if buyers and sellers miscalculate, the seller has always made up the difference rather than expose the buyers to risk. Thus, the putative seller in fact passes on none of the risks of ownership.

We don't know how long the fiction of sales treatment will last. ... the regulators are starting to think about these issues. ("Will Sales Treatment Survive a Recession?").

In late 1996, OCC Bulletin 1996-52: “Securitization-Guidelines for National Banks” maintained that “providing post-sale enhancements to prior asset sales constitutes recourse and would require full risk-based capital support for the entire pool of assets...” *The Comptroller’s Handbook* in November 1997 reiterated those principles. Nonetheless, regulators seemed unwilling or unable to restrict implicit recourse, and the practices continued.

In 1999, the OCC again reiterated its concern in OCC Bulletin 1999-46: “Interagency Guidance on Asset Securitization Activities”:

Recent examinations have disclosed significant weaknesses in the asset securitization practices of some insured depository institutions. These weaknesses raise concerns about the general level of understanding and controls among institutions that engage in such activities. The most frequently encountered problems stem from: (1) the failure to recognize and hold sufficient capital against explicit and implicit recourse obligations that frequently accompany securitizations... (p. 1).

OCC Guidance 2002-20, “Interagency Guidance on Implicit Recourse in Asset Securitizations,” described explicit examples of what the agency considers implicit recourse, many of which are identical to the events in our sample:

Banking organizations typically have provided implicit recourse in situations where the originating organization perceived that the failure to provide this support, even though not contractually required, would damage its future access to the asset-backed securities market. An originating banking organization can provide implicit recourse in a variety of ways. The ultimate determination as to whether implicit recourse exists depends on the facts. However, as discussed in detail later in this document, the following actions point to a finding of implicit recourse:

- *Selling assets to a securitization trust or other special purpose entity (SPE) at a discount from the price specified in the securitization documents, which is typically par value;*
- *Purchasing assets from a trust or other SPE at an amount greater than fair value;*
- *Exchanging performing assets for nonperforming assets in a trust or other SPE;*
- *and*
- *Funding credit enhancements beyond contractual requirements.*

By providing implicit recourse, a banking organization signals to the market that the risks inherent in the securitized assets are still held by the organization and, in effect, have not been transferred ...

Particular attention should be paid to revolving securitizations, such as those used for credit card lines ... where receivables generated by the lines are sold into the

securitization. ...Once an early amortization event occurs, the banking organization could have difficulties using securitization as a continuing source of funding and, at the same time, have to fund the new receivables generated by the lines of credit on its balance sheet. Thus, banking organizations have an incentive to avoid early amortization by providing implicit support to the securitization. (pp. 3-4).

Regulatory rulings like these in the period from 1996 to the present prompted significant changes in the structure of more recent securitizations and in the type of recourse provided. Most recently, regulators have questioned the manner in which NextBank and First Consumers National Bank classified fraud losses in order to keep chargeoffs out of securitized pools, a more continuous form of implicit recourse. Hence, since 1998 the type of discrete actions of implicit recourse that are contained in our sample have not occurred, not because recourse is no longer an issue, but because the specific form of recourse we look at is now recognized and prohibited.

II. 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.

A. 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 1.⁴ 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 . The announcement day is defined as day 0. The market model parameters, α_i and β_i , are estimated over the 200-day window ending 10 days prior to the announcement (day -210 to day

⁴ 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.

-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). We use the cross-sectional test statistic of Boehmer, Musumeci, and Poulsen (1991) to test the significance of the abnormal returns. This statistic controls for event-induced variance increases associated with significant firm events.⁵

Table 2 contains the results of the event study conducted for the recourse credit card bank sample. As can be seen in Panel A, the two-day (day 0, 1) abnormal return is positive and significant. It appears that the market reaction actually occurs on day 1, which has a positive, significant abnormal return of 1.36%. This abnormal return is quite large and indicates that the market did not anticipate the recourse announcement.

Panel B contains the two-day abnormal returns for each of the individual events. Three observations about Panel B are important. First, 10 of the 14 events are associated with positive abnormal returns, suggesting that there are circumstances under which investors may view recourse in a negative light.⁶ The substantial variation in the magnitude of both positive and negative abnormal returns suggests the results in Panel A are not driven by a few large outliers. Second, there is not a discernible time trend to the abnormal returns. The four events associated with negative abnormal returns – Citibank 1992, Household Finance November 1995, Mercantile

⁵ Higgins and Peterson (1998) show that the performance of the cross-sectional t-statistic of Boehmer, Musumeci, and Poulsen (1991) is superior relative to other test statistics.

⁶ We also searched for asset-backed security return behavior around the events indicated. Out of twenty-seven 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 twelve 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 is severely lacking.

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.

B. 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.⁷ 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 the announcement of the provision of 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 the recourse announcing firm and other firms that are securitizing credit card debt.

To test this hypothesis, we calculate abnormal returns associated with recourse announcements for a ***non-recourse credit card bank sample*** (other securitizing banks that 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* 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

⁷ 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.

and the Securities Data Corp. *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 3.⁸

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 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. Again, we define the announcement period as days 0 and 1 and use the cross-sectional t-statistic of Boehmer, Musumeci, and Poulsen (1991) to test for significance. Although we do not have returns data on 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. Panel A contains average abnormal returns across all events. Significant positive abnormal returns for the non-recourse banks are found around the recourse announcement (days 0 and 1). The two-day announcement period abnormal return is 0.66% and is significant at the 1% level. Such a large abnormal return for the industry is rather surprising, suggesting that the market places a great deal of importance on the recourse announcements of *other* banks.

Panel B contains the results for the specific events investigated in the sample. Similar to the results found for the recourse sample, it is clear that the results are not driven by outliers. Ten

⁸ 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 in 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%.

of the 15 events are associated with positive abnormal returns for the non-recourse banks. Only 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%. We observe that abnormal returns for the non-recourse credit card bank sample do not seem to be driven by outliers and do not illustrate a discernible time trend. 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.

III. Long-Run Stock Price and Operating Performance Effects of Recourse

Section II 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.⁹ 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

⁹ For example, Loughran and Ritter (1995) find firms that announcing seasoned equity offerings experience stock price declines, relative to a matching sample of similar firms, for several years after the announcement and 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.

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.

A. 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 matching 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.¹⁰ Potential matching firms have the same four-digit SIC code as the announcing firm and have an asset size between 25 percent and 200 percent of the announcing firm at the time 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. 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 II.B) on the basis of outstanding securitization volume and portfolio size at the time of the recourse announcement. We call this the *credit card issue size matched sample* (CCISM sample).

¹⁰ Barber and Lyon (1997) suggest including the book-to-market equity ratio as a matching variable.

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 in the sample.¹¹ Thus, the sample used for the examination of long-run performance contains 10 recourse-announcing firm observations. Table 5 lists the recourse credit card bank sample firms and the selected matching companies based on the two selection criteria.

B. 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. The significance of the abnormal returns is tested using a nonparametric sign test.

Table 6 contains the results of the long-run median stock price performance tests (Appendix A contains individual firm results). Panel A shows the median buy and hold returns for the recourse credit card bank sample firms, the SBEM sample firms, and the CCISM sample firms. Panel B compares recourse credit card bank sample firms to the SBEM sample firms and the CCISM sample firms. One year prior to the announcement, returns for recourse credit card bank sample firms are significantly lower than those for CCISM sample firms. Two years post-announcement, returns for recourse credit card bank sample firms are significantly higher than those for SBEM sample firms. Thus, it appears that the recourse credit card bank sample firms are under-performing matching firms prior to the recourse announcement, perhaps leading to the

¹¹ 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.

recourse announcement. After the recourse announcement, performance improves, suggesting that the provision of recourse does not result in a long-term cost to the recourse credit card bank sample firms in terms of stock price performance.

C. 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,¹² and return on equity. 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). To determine if significant differences are present in the operating performance recourse credit card bank sample firms and the matching firms, the Wilcoxon signed-rank test is used.¹³ 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. Again, we use the Wilcoxon signed-rank test to determine if there are significant differences between recourse credit card bank sample firm ratios and the matching firm ratios.

Median operating performance results appear in Table 7 (Appendix B contains individual firm results). 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 sample firms deteriorates prior to the support announcement and improves after the support announcement.

¹² 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.

¹³ The method used to determine differences in operating performance follows that of Loughran and Ritter (1997).

Those differences are confirmed statistically in Panels D, E, F, and G. Panel D examines annual differences in operating performance between recourse credit card bank sample firms and the SBEM matching firms and Panel E contains annual differences in operating performance between recourse credit card bank sample firms and the CCISM matching firms. In general, the annual differences between the recourse credit card bank sample firms and the matching firms are not statistically significant at conventional levels. When comparing recourse credit card bank sample firms to the SBEM sample the only statistically significant difference in operating performance occurs in the year following the announcement, where EBITDA to assets for recourse credit card bank sample firms are significantly lower than the SBEM firms. There are a few more statistically significant differences between recourse credit card bank sample firms and the CCISM sample. Profit margins for recourse announcing firms are substantially lower than the CCISM firms in the year of and the year after the recourse announcement. EBITDA to assets, however, is shown to be larger for recourse credit card bank sample firms two years after the recourse announcement. Thus, again, there appears to be some slight underperformance around the announcement and some indication of improvement after the announcement.

Examining performance changes over periods longer than one year yields more statistically significant differences. Panels F and G contain the median change from fiscal year -2 to +1 and from +1 to +2 in the ratios of recourse credit card bank sample firm performance measures relative to the SBEM and CCISM matched samples, respectively. Comparison of operating performance of recourse credit card bank sample firms to the SBEM firms shows that announcing firms have a statistically significant increase in operating performance after the recourse announcement, whether measured by EBITDA/assets, profit margin, return on assets, EBITDA/sales, or return on equity. Comparison of recourse credit card bank sample firms

relative to the CCISM matched sample shows that the profit margin and EBITDA/sales for recourse credit card bank sample firms decreased by statistically significant amounts over the years prior to the announcement. Furthermore, EBITDA/assets, profit margin, return on assets, and return on equity for the recourse credit card bank sample firms increased by statistically significant amounts, relative to the CCISM sample, in the years following the announcement. These results are again similar to those found for long-run stock returns. Performance of the recourse credit card bank sample firms was poor prior to the announcement but improved post-announcement.

IV. Default Probability and Recourse

Results for long-term equity returns and operating performance bring up the possibility that weak companies are the ones that provide recourse. If recourse credit card banks are weak enough, support may place the deposit insurance safety net at risk. We examine how weak our recourse credit card bank sample firms are by including well-known default prediction variables in a probit model of support to analyze their effect. The model is estimated on a data set constructed by combining the recourse credit card and non-recourse credit card bank samples. Finding that variables associated with default are similarly associated with support would suggest that ABS support is provided by firms at risk of default and/or insolvency.

We obtain our default prediction variables from the seven-variable ZETA™ model of Altman, Haldeman, and Narayanan (1977). Their well-known model accords well with basic finance theory, which suggests that the probability of insolvency should be an increasing function of asset risk and leverage. Additionally, asset liquidity (relative to liabilities) may also be a factor influencing the risk of failure. If the same relationships predict support, we surmise that support is provided by weak banks (those closer to default).

The Altman, Haldeman, and Narayanan (1977) variables are return on assets; the variability of return on assets; the debt service ratio; accumulated profits; liquidity; the market to book ratio of capital; and size of the firm. We obtain data to compute the variables for our matched credit card bank sample from bank call reports, bank holding company Y-9 reports, and CRSP. Banks that provide recourse are coded as 1, and banks that do not provide recourse are coded as 0.

Results of our Altman, Haldeman, and Narayanan (1977) variant appear in Table 8. Although Altman, Haldeman, and Narayanan (1977) associate lower return on assets, liquidity, capital, and size and higher standard deviations of return on assets and debt service ratios with default, we find the coefficients on return on assets, liquidity, capital, standard deviation of return on assets, and debt service ratios opposite those results (though the coefficients for capital and the debt service ratio are statistically insignificant). Only cumulative profitability and size obtain signs that suggest recourse may be associated with default, though only the coefficient on size is statically significant. This size coefficient may not be surprising, since we are using the union of the recourse and non-recourse credit card bank samples, and the firms providing recourse are typically not industry leaders. Hence, we find that firms providing recourse have higher return on assets, greater liquidity, less variability in return on assets, and are of smaller size than non-recourse credit card banks. On the basis of these results, it appears that providing recourse is not associated with the probability of default or insolvency in a manner that may place the safety net at risk. Rather, the strategy is used by firms that have liquidity sufficient to provide recourse and recover thereafter.

IV. 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.

A. Changes in securitization terms for recourse credit card bank sample firms

Table 9 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 9 illustrate evidence consistent with this hypothesis. A-class and B-class enhancement 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 9 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 9 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 average 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.

B. Changes in securitization terms for CCISM sample firms

Table 10 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, on average, increase only about 2.3 times over the pre-recourse interval for the CCISM firms in Table 10 compared with over four times the pre-recourse interval for recourse credit card bank sample firms in Table 9. 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 recourse is market access.

V. 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, default probabilities, 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*. However, *ex ante*, the firms providing recourse are weaker than matched samples of their counterparts. Nonetheless, the firms providing recourse are not so weak as to suggest they face an imminent threat of default or insolvency, such that recourse could represent a significant threat to the bank safety net.

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.

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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 Company	54%	100%	1,682%	9/11/91	Sears Credit Account Trust 1990-C	Added higher quality accounts
Sears Roebuck and Company	54%	100%	1,682%	10/14/91	Sears Credit Account Trust 1990-A,D,E and 1989-C,E	Removed early amortization trigger
Sears Roebuck and Company	54%	100%	1,682%	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 Corporation	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 ^a	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 ^a	100%	101%	5/96	PB&T Master Credit Card Trust II 1994-A	Added discounted receivables
Tandy Corporation	32%	100%	3,919%	8/93	Tandy Master Trust Series A	Increased credit enhancement

^a Prudential Bank and Trust is owned by a non-public insurance company.

Table 2**Abnormal Stock Returns for Credit Card Banks Announcing Recourse**

The following table contains abnormal stock returns for credit card banks that announce the provision of recourse to an outstanding credit card securitization for the 10 days prior to and the 10 days following the recourse announcement date. We examine a two-day announcement window, the announcement day (Day 0) and the following day (Day 1), to determine the market's reaction to the announcement. The significance of the abnormal returns is tested using the cross-sectional test statistic of Boehmer, Musumeci, and Poulsen (1991). The sample size is 14. Panel A contains average abnormal returns across all events. Panel B contains the two-day announcement window return and the standardized abnormal return for the individual events. * indicates significance at the 0.10 level, ** indicates significance at the 0.05 level, and *** indicates significance at the 0.01 level

Panel A: Average Abnormal Returns

Days	Average abnormal return	Standard deviation of abnormal returns	Cross-sectional t-statistic
-10	0.0008	0.0110	0.1812
-9	-0.0055**	0.0115	-2.2634
-8	-0.0079	0.0216	-1.3130
-7	0.0003	0.0105	0.3164
-6	-0.0018	0.0171	-0.4189
-5	0.0057*	0.0112	1.9777
-4	0.0051	0.0227	0.8204
-3	0.0008	0.0163	0.1233
-2	0.0029	0.0127	0.8358
-1	-0.0004	0.0173	-0.4732
0	-0.0037	0.0103	-1.4719
1	0.0136***	0.0126	3.8380
2	0.0027	0.0210	0.0391
3	0.0000	0.0116	0.0276
4	-0.0066***	0.0106	-2.6182
5	0.0049	0.0132	1.2834
6	-0.0036	0.0114	-1.1707
7	0.0008	0.0145	-0.1222
8	0.0062*	0.0116	1.9437
9	0.0028	0.0167	0.3241
10	0.0067	0.0155	1.7185
0, 1	0.0100**	0.0163	2.1927

(Continued)

Table 2...Continued**Abnormal Stock Returns for Credit Card Banks Announcing Recourse**

Panel B: 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	0.0010	0.4353
	Median	0.0067	0.3190
	Standard Deviation	0.0163	0.7429

Table 3
Non-Recourse Credit Card Bank Sample Composition

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

Table 4**Abnormal Stock Returns for Non-Recourse Providing Credit Card ABS Sponsors Associated with an Announcement of Recourse**

The following table contains abnormal stock returns for all non-recourse providing banks issuing credit card backed debt for the 10 days prior to and the 10 days following the announcement of the provision of recourse for a credit card securitization. Also, the cumulative abnormal return over the announcement day (Day 0) and the following day (Day 1) is included. 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 significance of the abnormal returns is tested using the cross-sectional test statistic of Boehmer, Musumeci, and Poulsen (1991). Panel A contains average abnormal returns across the whole sample. Panel B contains two-day abnormal returns and standardized abnormal returns for the individual events. The sample size is 15. * indicates significance at the 0.10 level, ** indicates significance at the 0.05 level, and *** indicates significance at the 0.01 level

Panel A: Average Abnormal Returns

Days	Average abnormal return	Standard deviation of abnormal returns	Cross-sectional t-statistic
-10	0.0013	0.0078	0.6964
-9	-0.0019	0.0083	-0.9733
-8	-0.0037	0.0115	-1.3194
-7	-0.0035	0.0068	-1.6652
-6	0.0006	0.0093	0.6366
-5	-0.0006	0.0079	-0.7110
-4	0.0017	0.0087	0.4823
-3	0.0002	0.0060	0.2001
-2	0.0023	0.0096	0.8755
-1	0.0007	0.0059	0.4672
0	0.0039**	0.0078	2.0404
1	0.0027**	0.0058	2.1622
2	-0.0010	0.0106	-0.1048
3	0.0013	0.0080	0.6650
4	-0.0027	0.0068	-1.4459
5	0.0001	0.0074	-0.0633
6	0.0006	0.0104	0.0245
7	0.0018	0.0098	0.8302
8	0.0027	0.0070	1.3787
9	-0.0009	0.0087	-0.4194
10	0.0023	0.0075	1.1954
0, 1	0.0066***	0.0093	2.9800

(Continued)

Table 4...Continued**Abnormal Stock Returns for Non-Recourse Providing Credit Card ABS Sponsors
Associated with an Announcement of Recourse**

Panel B: Two-Day Announcement Window Abnormal Returns for Non-Recourse Providing Credit Card Banks

Announcing Firm	Announcement Date	Two-Day (Days 0,1) Abnormal Return for Non-Recourse Providing Credit Card Banks	Standardized Two-Day Abnormal Return for Non-Recourse Providing Credit Card Banks
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

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	5/13/1991	Bank of America	Chase
Sears	9/11/1991	Wal Mart	Bank of New York
Household Int'l	3/31/1993	Beneficial	Advanta
Tandy	8/1/1993	Circuit City	Charming Shoppes
Mercantile	2/12/1996	Compass	National City Corp
First Union	6/10/1996	KeyCorp	Peoples Bank
First Chicago	7/11/1996	BankBoston	Chase
AT&T	9/9/1996	Verizon	Capital One
Bank One	3/5/1997	FleetBoston	Bank of America
Sears	5/18/1998	JC Penny	MBNA

Table 6
Holding Period Returns for Recourse Announcing and Matching Firms

The following table contains holding period returns for recourse announcing firms and for two different matching samples. Returns are calculated for one-year pre-announcement, one-year post-announcement, and two-year post announcement holding periods. Panel A contains median long-run returns for the recourse firms, and for firms in the two matching samples. Panel B contains the median difference in returns for recourse announcing firms relative to a sample of firms matched on size and book-to-market equity. The matching procedure used is similar to that of Loughran and Ritter (1997). Panel C contains the median difference in returns for recourse announcing firms relative to a sample of firms matched on the amount of outstanding credit-card backed issuances at the time of the support announcement. Sign tests are conducted to determine if significant differences in the returns of the announcing and matching firms exists. * indicates a significant difference at the 10% level, ** indicates a significant difference at the 5% level, and *** indicates a significant difference at the 1% level for the sign test

Panel A: Median holding period returns for recourse announcing firms, size and book-to-market equity matched firms, and credit card issue size matched 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

Panel B: Median difference in holding period returns for announcing firms and matched firms

	Holding Period		
	One Year Pre-Announcement	One Year Post-Announcement	Two Years Post-Announcement
Announcing Returns Minus SBEM Matching Firm Returns	-0.1314	0.0112	0.1659*
Announcing Returns Minus CCISM Matching Firm Returns	-0.0931*	-0.2266	0.0026

Table 7**Median Operating Performance Measures for Recourse Announcing Firms and Differences in Medians between Announcing and Matching Firms**

Panels A, B, and C contain median operating performance measures for recourse announcing firms, size and book-to-market equity matched firms, and issue size matched firms. Panel D contains the difference in median operating performance between announcing firms and a size and book-to-market equity matched sample of firms. The matching procedure is similar to that used by Loughran and Ritter (1997). Panel E contains the difference in median operating performance between the announcing firms and a matched sample of firms chosen based on the amount of credit-card backed securities outstanding in the year of the support announcement. Panels F and G 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. Z-statistics are calculated using the Wilcoxon signed-rank test to determine the equality of the distributions between the announcing firms and the matching firms. * indicates a significant difference at the 10% level, ** indicates a significant difference at the 5% level, and *** indicates a significant difference at the 1% level. There are 10 announcing firm observations available in years -2 through +1 and 9 available in year +2.

Panel A: Recourse credit card bank sample firms median operating performance measures					
Fiscal year relative to support year	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
-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

Panel B: Size and book-to-market equity matched (SBEM) sample median operating performance measures					
Fiscal year relative to support year	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
-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

Panel C: Credit card issue size matched (CCISM) sample median operating performance measures					
Fiscal year relative to support year	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
-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

(continued)

Table 7...continued

Median Operating Performance Measures for Recourse Announcing Firms and Differences in Medians between Announcing and Matching Firms

Panel D: Differences between recourse credit card bank sample firms and size and book-to-market equity | matched (SBEM) firms

Fiscal year relative to support year	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
-2	-0.0004	0.0012	0.0001	0.0075	-0.0095
-1	-0.0027	0.0022	-0.0018	0.0091	-0.0148
0	-0.0008	-0.0155	-0.0024	-0.0022	-0.0269
1	-0.0028*	-0.0054	-0.0022	-0.0184	-0.0215
2	0.0010	0.0107	0.0001	0.0057	0.0231

Panel E: Differences between recourse credit card bank sample firms and credit card issue size matched (CCISM) firms

Fiscal year relative to support year	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
-2	0.0205*	0.0082	0.0022	0.0413	-0.0043
-1	0.0073	-0.0117	0.0006	0.0049	-0.0282
0	0.0112	-0.0369**	-0.0012	-0.0112	-0.0329
1	0.0065	-0.0268**	-0.0013	-0.0219	-0.0202
2	0.0159**	-0.0159	0.0025	-0.0101	0.0340

Panel F: Median change in the ratios of recourse credit card bank sample firms performance measures relative to the size and book-to-market equity matched (SBEM) sample

Time Period	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
-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***

Panel G: Median change in the ratios of recourse credit card bank sample firms performance measures relative to the credit card issue size matched (CCISM) sample

Time Period	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
-2 to +1	-0.0081	-0.0398**	-0.0044	-0.04625*	0.0054
+1 to +2	0.0047**	0.0197*	0.0063**	0.0167	0.0413**

^a 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.

Table 8**Estimation of the Altman, Haldeman, and Narayanan (1977) Model for Recourse Providing and Non-Recourse Providing Credit Card Backed Security Sponsors**

The following table contains estimates of the 7-variable ZETA™ model of Altman, Haldeman, and Narayanan (1977). The Altman, Haldeman, and Narayanan (1977) variables are: return on assets; the variability of return on assets; the debt service ratio; accumulated profits; liquidity; the market to book ratio of capital; and size of the firm. We include the variables in a probit model of support to analyze their effect on the decision to provide recourse. Recourse providing banks are coded as 1 and non-recourse providing banks are coded as zero. Parameter estimates, chi-square statistics, and p-values associated with the chi-square statistics are reported. * indicates significance at the 10% level, ** indicates significance at the 5% level, and *** indicates significance at the 1% level.

Variable	Parameter Estimate	Chi-Square	P-Value
Intercept	13.1251	2.3956	0.1217
ROA	346.0000 **	4.3617	0.0368
SIGMAROA	-921.0000 ***	10.3285	0.0013
DEBTSERV	-0.2253	0.0229	0.8797
CUMUPROF	-24.9929	0.8994	0.3429
LIQUID	8.9241 **	3.8516	0.0497
CAPITAL	0.5308	2.0119	0.1561
SIZE	-1.0173 **	4.7297	0.0296
Intercept	13.1251	2.3956	0.1217

Table 9
Comparison of Issue Attributes Before and After Recourse

The following table contains credit card ABS deal attributes from those deals prior and subsequent to recourse events. All data are from the Securities Data Corp. *New Issues Database*.

Issuer and Support Event Date	Comparison Deals: Before Support After Support	Comparison 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 ^a (days)	Time Between Before and After Issues
Sears Roebuck, 19910911											
	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		
Sears Roebuck, 19911014											
	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		
Citibank NA(Citigroup Inc), 19910513 ^{b,c,d}											
	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		
Citibank NA(Citigroup Inc), 19930315 ^e											
	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		
Household, 19930331											
	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		
Household International Inc, 19951106											
	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		
First Chicago NBD Corp, 19960711											
	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 ^f											
	AT&T Universal 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&T Universal 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&T Universal 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 ^g											
	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		

^a 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.

^b 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.

^c 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.

^d Tertiary credit support obtained from 1990-6, June 21, 1990.

^e 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.

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.

Table 10
Comparison of Issue Attributes Before and After Recourse, CCISM Firms

The following table contains credit card ABS deal attributes from those deals prior and subsequent to recourse events. All data are from the Securities Data Corp. *New Issues Database*.

Recourse Firm, Recourse Date and Comparison CCISM Deals	Deal Issue Date	A-Class Pool Size (\$ thou)	A-Class Support	A-Class Coupon	B-Class Pool Size (\$ thou)	B-Class Support	B-Class Coupon	Tertiary Credit Support	Prior Issue Frequency (days)	Time Between Before and After Issues
Citigroup, 5/13/1991										
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		
Sears, 9/11/1991										
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		
Sears, 10/14/1991										
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		
Citigroup, 3/15/1993										
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%	1moL+0.13	50,000	11.0%	1moL+0.285	11% CCA		
Household Int'l, 3/31/1993										
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%	1moL+0.23	na	na	na	13% CCA		
Household Int'l, 11/6/1995										
Advanta Crdt Cd Mr Tr 1995-D	07/19/1995	519,000	17.5%	1moL+0.19	30,000	11.5%	1moL+0.32	11.5% CIA	178	90
Advanta Credit Card Master	11/14/1995	801,000	13.8%	6.05%	44,600	7.8%	1moL+0.30	5.75% CIA □ 2% CCA		
				1moL+0.19 ^a						
First Union, 6/10/1996										
People's Bank CCMT 1995-1	03/21/1995	379,000	14.5%	1moL+0.20	21,000	9.0%	1moL+0.35	9% CCA	145	458
People's Bank CCMT 1996-1	06/21/1996	379,000	14.5%	1moL+0.15	21,000	9.0%	1moL+0.30	9% CCA		
First Chicago, 7/11/1996										
Chase Manhattan Credit 1996-3, 4 ^b	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%	1moL+0.09	95,000	9.0%	1moL+0.29	9% CIA		
AT&T Universal, 9/9/1996										
Capital One Bank Series 1995-3	09/07/1995	840,000	20.0%	1moL+0.15	109,200	7.0%	private	7% CIA	114	353
Capital One Master Tr 1996-2	11/25/1996	600,000	20.0%	1moL+0.10	54,000	11.0%	private	11% CIA		
First Union, 2/24/1997										
People's Bank CCMT 1996-1	06/21/1996	379,000	14.5%	1moL+0.15	21,000	9.0%	1moL+0.30	9% CCA	458	279
People's Bank CCMT 1997-1	03/27/1997	425,000	15.0%	1moL + 0.12	33,750	8.3%	1mL + 0.32	8.25% CIA		
Bank One, 3/5/1997										
BA Master CC Trust 1996-A	07/15/1996	427,500	14.5%	1moL+13	32,500	8.0%	1moL+26	8% CIA	na	325
BankAmerica CCMT 97A	06/05/1997	648,800	13.5%	1moL+11	41,300	8.0%	1moL+29	8% CIA		
First Union, 5/19/1997										
People's Bank CCMT 1997-1	03/27/1997	425,000	15.0%	1moL + 0.12	33,750	8.3%	1mL + 0.32	8.25% CIA	279	181
People's Bank CCMT 1997-2	09/24/1997	425,000	15.0%	1moL + 0.13	33,750	8.3%	1mL + 0.33	8.25% CIA		
Sears, 5/18/1998										
MBNA Master CC Trust 1997-N	11/19/1997	765,000	16.0%	3moL+7	67,500	8.0%	3moL+23	8% CIA	75	103
MBNA Master CC Trust 1998-C	06/10/1998	637,500	16.0%	1moL+8	56,250	8.0%	1moL+25	8% CIA		

^a Tranche is half fixed, half floating.

^b Reported numbers are the average of 1996-3 and 1996-4

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

na indicates data field is not applicable to issue.

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

Appendix A

Long-run Stock Price Performance – Individual Firm Results

The following appendix contains long-run buy and hold returns for recourse announcing firms, size and book-to-market equity matched firms, and issue size matched firms. Returns are reported for the year before and the two years after a recourse announcement occurs.

Panel A: Recourse announcing firms

	Year relative to recourse announcement		
	-1	1	2
Sears	0.5712	0.0765	1.0705
Banc One	0.3051	0.6145	0.5622
Tandy	0.1715	0.3816	1.1716
AT&T	0.0140	0.1434	0.5378
First Union	0.3897	0.6503	1.0784
First Chicago	0.1744	0.7685	1.3183
Household	0.5280	-0.0721	0.4158
Sears	0.1660	-0.2293	-0.3981
Citigroup	-0.2783	0.2510	0.7837
Mercantile	0.2431	0.3326	1.0165

Panel B: Size and book-to-market equity matched firms

	Year relative to recourse announcement		
	-1	1	2
Wal-Mart	0.8993	0.1963	-0.0429
FleetBoston	0.4662	0.4060	0.4691
Circuit City	0.7686	-0.1029	0.3440
Verizon	0.0422	0.4225	0.6507
KeyCorp	0.3851	0.5408	0.9250
BankBoston	0.2762	0.5659	1.1517
Beneficial	0.1303	0.0889	0.2505
JC Penny	0.4722	-0.2543	-0.7307
Bank of America	0.3483	0.2536	0.1901
Compass	0.2000	0.4285	1.2610

Panel C: Issue size matched firms

	Year relative to recourse announcement		
	-1	1	2
Bank of New York	0.4195	0.3920	0.7943
Bank of America	0.6216	0.5354	0.3431
Charming Shoppes	-0.1515	-0.3153	-0.6284
Capital One	0.1130	0.4082	2.7069
Peoples Bank	0.4111	0.7847	1.4987
Chase	0.3864	0.6194	1.2917
Advanta	0.7338	0.3131	0.4146
MBNA	0.6877	0.3333	0.3611
Chase	-0.1911	0.6732	0.7797
National City Corp.	0.2508	0.5210	1.0269

Appendix B

Financial Performance Ratios – Individual Firm Results

The following appendix contains financial performance ratios for recourse announcing firms, size and book-to-market equity matched firms, and issue size matched firms. Ratios are reported for the two years before, the two years after and in the year in which a recourse announcement occurs.

Panel A: Financial performance two years prior to recourse announcement

Recourse announcing firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Sears	0.0561	0.0280	0.0173	0.0907	0.1107
Banc One	0.0357	0.1424	0.0141	0.3601	0.1608
Tandy	0.1761	0.0420	0.0635	0.1164	0.1062
AT&T	0.1657	0.0627	0.0594	0.1749	0.2628
First Union	0.0303	0.1414	0.0114	0.3740	0.1638
First Chicago	0.0253	0.1536	0.0113	0.3440	0.1615
Household	0.0554	0.0326	0.0050	0.3618	0.0982
Sears	0.1154	0.0332	0.0351	0.1091	0.2570
Citigroup	0.0294	0.0131	0.0022	0.1784	0.0605
Mercantile	0.0315	0.1574	0.0132	0.3765	0.1507

Size and book-to-market equity matched firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Wal-Mart	0.2418	0.0405	0.1316	0.0745	0.2783
FleetBoston	0.0339	0.0775	0.0072	0.3634	0.1022
Circuit City	0.1514	0.0013	0.0036	0.0559	0.0086
Verizon	0.2291	-0.0547	-0.0311	0.4032	-0.1241
KeyCorp	0.0302	0.1589	0.0128	0.3752	0.1881
BankBoston	0.0275	0.0958	0.0098	0.2697	0.1653
Beneficial	0.0980	0.0822	0.0149	0.5401	0.1310
JC Penny	0.1163	0.0380	0.0490	0.0902	0.1521
Bank of America	0.0241	0.0968	0.0112	0.2087	0.2249
Compass	0.0261	0.1503	0.0109	0.3591	0.1659

Issue size matched firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Bank of New York	0.0085	0.0092	0.0010	0.0751	0.0214
Bank of America	0.0256	0.1194	0.0104	0.2933	0.1528
Charming Shoppes	0.1516	0.0455	0.0768	0.0898	0.1348
Capital One	0.0981	0.1453	0.0308	0.4626	0.2007
Peoples Bank	0.0255	0.1346	0.0108	0.3179	0.1608
Chase	0.0273	0.1077	0.0106	0.2787	0.1732
Advanta	0.0369	0.0832	0.0147	0.2093	0.2135
MBNA	0.0858	0.1447	0.0279	0.4455	0.2784
Chase	0.0068	-0.0478	-0.0062	0.0529	-0.1621
National City Corp.	0.0369	0.1478	0.0134	0.4074	0.1779

Panel B: Financial performance one year prior to recourse announcement

Recourse announcing firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Sears	0.0433	0.0161	0.0094	0.0744	0.0704
Banc One	0.0357	0.1389	0.0140	0.3536	0.1690
Tandy	0.1353	0.0388	0.0581	0.0903	0.1237
AT&T	0.1682	0.0017	0.0016	0.1878	0.0080
First Union	0.0279	0.1351	0.0108	0.3474	0.1614
First Chicago	0.0256	0.1077	0.0094	0.2921	0.1445
Household	0.0453	0.0457	0.0061	0.3376	0.1187
Sears	0.1199	0.0288	0.0307	0.1124	0.2027
Citigroup	0.0312	0.0119	0.0021	0.1762	0.0559
Mercantile	0.0296	0.1551	0.0136	0.3378	0.1508

Size and book-to-market equity matched firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Wal-Mart	0.2367	0.0417	0.1312	0.0752	0.2713
FleetBoston	0.0378	0.1416	0.0133	0.4021	0.1763
Circuit City	0.1689	0.0280	0.0783	0.0605	0.1746
Verizon	0.2369	0.1384	0.0769	0.4262	0.2780
KeyCorp	0.0299	0.1363	0.0124	0.3271	0.1652
BankBoston	0.0289	0.1014	0.0114	0.2568	0.1668
Beneficial	0.0816	0.0249	0.0040	0.5123	0.0415
JC Penny	0.0907	0.0233	0.0256	0.0825	0.1022
Bank of America	0.0221	0.0905	0.0101	0.1987	0.1920
Compass	0.0264	0.1299	0.0107	0.3187	0.1560

Issue size matched firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Bank of New York	0.0195	0.0578	0.0068	0.1662	0.1238
Bank of America	0.0309	0.1356	0.0128	0.3274	0.1748
Charming Shoppes	0.1710	0.0571	0.0915	0.1068	0.1610
Capital One	0.0906	0.1252	0.0266	0.4265	0.2111
Peoples Bank	0.0280	0.1168	0.0103	0.3165	0.1330
Chase	0.0158	0.1126	0.0098	0.1825	0.1633
Advanta	0.0537	0.1405	0.0271	0.2791	0.2763
MBNA	0.0948	0.1376	0.0292	0.4463	0.3160
Chase	0.0135	-0.0244	-0.0034	0.0971	-0.0859
National City Corp.	0.0350	0.1348	0.0128	0.3670	0.1700

Panel C: Financial performance in the year of a recourse announcement

Recourse announcing firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Sears	0.0431	0.0223	0.0120	0.0801	0.0923
Banc One	0.0418	0.0988	0.0113	0.3667	0.1275
Tandy	0.1355	0.0233	0.0301	0.1049	0.0649
AT&T	0.2150	0.1132	0.1064	0.2288	0.2911
First Union	0.0286	0.1251	0.0107	0.3349	0.1498
First Chicago	0.0310	0.1419	0.0137	0.3203	0.1677
Household	0.0462	0.0671	0.0091	0.3417	0.1437
Sears	0.1193	0.0254	0.0280	0.1079	0.1728
Citigroup	0.0279	-0.0144	-0.0021	0.1900	-0.0622
Mercantile	0.0274	0.1184	0.0101	0.3211	0.1175

Size and book-to-market equity matched firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Wal-Mart	0.2010	0.0396	0.1134	0.0702	0.2406
FleetBoston	0.0398	0.1610	0.0152	0.4206	0.1774
Circuit City	0.1748	0.0337	0.0873	0.0675	0.1916
Verizon	0.2229	0.1438	0.0757	0.4235	0.2535
KeyCorp	0.0301	0.1297	0.0116	0.3374	0.1604
BankBoston	0.0310	0.1042	0.0104	0.3101	0.1469
Beneficial	0.0766	0.0936	0.0142	0.5053	0.1530
JC Penny	0.1063	0.0181	0.0241	0.0800	0.0823
Bank of America	0.0264	0.0916	0.0097	0.2488	0.1668
Compass	0.0267	0.1322	0.0109	0.3231	0.1605

Issue size matched firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Bank of New York	0.0162	0.0289	0.0031	0.1515	0.0487
Bank of America	0.0279	0.1416	0.0116	0.3392	0.1446
Charming Shoppes	0.1933	0.0688	0.1100	0.1209	0.1822
Capital One	0.0818	0.1090	0.0240	0.3716	0.2097
Peoples Bank	0.0252	0.1220	0.0105	0.2934	0.1296
Chase	0.0113	0.1237	0.0073	0.1915	0.1345
Advanta	0.0630	0.2056	0.0372	0.3480	0.2331
MBNA	0.0891	0.1494	0.0301	0.4426	0.3247
Chase	0.0194	0.0439	0.0053	0.1606	0.1214
National City Corp.	0.0369	0.1495	0.0145	0.3811	0.1662

Panel D: Financial performance one year after a recourse announcement

Recourse announcing firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Sears	0.0288	-0.0751	-0.0471	0.0460	-0.4269
Banc One	0.0383	0.1214	0.0119	0.3910	0.1526
Tandy	0.1357	0.0450	0.0692	0.0882	0.1623
AT&T	0.1841	0.0907	0.0791	0.2111	0.2048
First Union	0.0296	0.1323	0.0121	0.3251	0.1576
First Chicago	0.0297	0.1510	0.0134	0.3355	0.1963
Household	0.0496	0.0799	0.0107	0.3698	0.1671
Sears	0.1237	0.0354	0.0393	0.1113	0.2108
Citigroup	0.0319	0.0226	0.0034	0.2137	0.0906
Mercantile	0.0229	0.0907	0.0068	0.3041	0.0849

Size and book-to-market equity matched firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Wal-Mart	0.1871	0.0367	0.1042	0.0658	0.2301
FleetBoston	0.0393	0.1532	0.0147	0.4103	0.1757
Circuit City	0.1729	0.0321	0.0852	0.0651	0.1864
Verizon	0.2397	0.0808	0.0455	0.4259	0.1920
KeyCorp	0.0299	0.1399	0.0125	0.3350	0.1774
BankBoston	0.0312	0.1307	0.0127	0.3215	0.2029
Beneficial	0.0750	0.0831	0.0124	0.5047	0.1382
JC Penny	0.0912	0.0189	0.0251	0.0687	0.0887
Bank of America	0.0290	0.0978	0.0083	0.3435	0.1193
Compass	0.0270	0.1376	0.0116	0.3216	0.1620

Issue size matched firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Bank of New York	0.0251	0.1030	0.0090	0.2864	0.1185
Bank of America	0.0261	0.0997	0.0084	0.3113	0.1125
Charming Shoppes	0.1705	0.0636	0.0962	0.1127	0.1528
Capital One	0.0911	0.1060	0.0268	0.3609	0.2120
Peoples Bank	0.0326	0.1193	0.0113	0.3445	0.1303
Chase	0.0162	0.1697	0.0101	0.2705	0.1854
Advanta	0.0595	0.2014	0.0341	0.3519	0.2407
MBNA	0.1025	0.1583	0.0332	0.4889	0.2439
Chase	0.0227	0.0574	0.0067	0.1960	0.1269
National City Corp.	0.0350	0.1567	0.0148	0.3715	0.1886

Panel E: Financial performance two years after a recourse announcement

Recourse announcing firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Sears	0.0397	0.0467	0.0261	0.0709	0.2350
Banc One	0.0380	0.1365	0.0130	0.3990	0.1757
Tandy	0.1634	0.0362	0.0778	0.0759	0.1361
AT&T	0.2510	0.1202	0.1074	0.2809	0.2507
First Union	0.0320	0.1342	0.0122	0.3531	0.1683
First Chicago	Data for First Chicago not available				
Household	0.0757	0.0881	0.0155	0.4299	0.1684
Sears	0.1223	0.0328	0.0364	0.1102	0.1984
Citigroup	0.0398	0.0689	0.0102	0.2680	0.2204
Mercantile	0.0264	0.1279	0.0105	0.3226	0.1221

Size and book-to-market equity matched firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Wal-Mart	0.1758	0.0360	0.0970	0.0652	0.2277
FleetBoston	0.0370	0.1020	0.0107	0.3530	0.1394
Circuit City	0.1724	0.0301	0.0838	0.0619	0.1913
Verizon	0.2517	0.0939	0.0538	0.4397	0.2276
KeyCorp	0.0295	0.1403	0.0124	0.3324	0.1615
BankBoston	Data for First Chicago not available				
Beneficial	0.0733	0.0628	0.0096	0.4801	0.1084
JC Penny	0.0805	0.0103	0.0161	0.0517	0.0495
Bank of America	0.0329	0.1229	0.0105	0.3873	0.1379
Compass	0.0254	0.1333	0.0105	0.3241	0.1549

Issue size matched firms					
	EBITDA/Assets	Profit margin	Return on assets	EBITDA/Sales ^a	Return on Equity
Bank of New York	0.0312	0.1472	0.0123	0.3744	0.1480
Bank of America	0.0290	0.1530	0.0125	0.3559	0.1777
Charming Shoppes	0.1166	0.0351	0.0532	0.0770	0.0800
Capital One	0.0965	0.1059	0.0292	0.3498	0.2166
Peoples Bank	0.0331	0.1015	0.0092	0.3632	0.1076
Chase	Data for First Chicago not available				
Advanta	0.0546	0.1916	0.0302	0.3466	0.2034
MBNA	0.1013	0.1668	0.0339	0.4978	0.1981
Chase	0.0239	0.0848	0.0095	0.2145	0.1437
National City Corp.	0.0342	0.1327	0.0121	0.3735	0.1535

^a 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.