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Chicago Fed Letter

Rescuing asset-backed securities markets

by Sumit Agarwal, senior financial economist, Crystal Cun, associate economist, and Mariacristina De Nardi, senior economist and economic advisor

On November 25, 2008, the Federal Reserve unveiled a loan facility to revive the market for asset-backed securities, which had essentially stopped functioning due to the global financial crisis. What are these securities and why is it important for these markets to continue to operate?

Asset-backed securities (ABS) are bonds backed by the cash flow of a variety of pooled receivables or loans. Firms issue ABS to diversify sources of capital, borrow more cheaply, reduce the size of

their balance sheets, and free up capital. Securities backed by auto loans, credit card receivables, student loans, and home equities represent the largest ABS market segments. The ABS market grew dramatically from the beginning of 1998 through 2006, when supply peaked at \$888 billion in the U.S.¹ In August 2007, the ABS market began shrinking in stages, with bond issues backed by residential mortgages drying up first, followed by the collapse of both the

spreads—i.e., the difference between ABS yields and risk-free yields, such as the Treasury rate and Libor (London interbank offered rate). In the new high-yield environment, there was no economic incentive for lenders to issue new ABS; and the intermediation of household and business credit between investors and borrowers ground to a halt.

To help ease the strain on the ABS market, the Fed introduced the Term Asset-Backed Securities Loan Facility (TALF) on November 25, 2008. This facilitated the renewed issuance of ABS at interest rate spreads closer to those available prior to the Lehman collapse.

Since the introduction of the TALF, ABS interest rate spreads have narrowed from historical highs in the fourth quarter of 2008. Spreads on three-year AAA-rated ABS (the highest quality rating) backed by credit card receivables and auto loans have fallen to approximately one-sixth of their peaks (see figure 1). At the consumer level, credit availability at auto finance companies has improved as interest rates on new auto loans also declined to 2.74% in March 2009 from a high of 7.09% in December 2008.² This indicates greater liquidity in the ABS markets and improved capital funding options for firms.

Issuance for the consumer ABS market has also increased across the credit

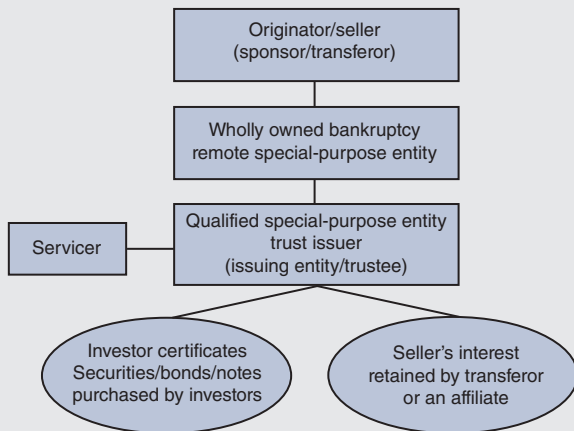
consumer ABS (auto, credit card, and student loan segments) and the commercial mortgage-backed securities markets. After the failure of Lehman Brothers in October 2008, investor confidence was further undermined and yields on ABS skyrocketed. This resulted in large increases in interest rate

1. AAA three-year fixed-rate ABS spreads



NOTE: AAA is the highest quality rating for asset-backed securities (ABS).
SOURCE: Deutsche Bank.

2. Securitization structure for asset-backed securities



Source: Federal Deposit Insurance Corporation (2007).

card, auto loan, student loan, and home equity loan sectors. In the second and third quarters of 2009, new issuance of consumer ABS averaged \$45 billion per quarter, rebounding to just under pre-crisis levels.³

In this *Chicago Fed Letter*, we examine two specific types of ABS—credit card and auto floor plan—to provide some insight into their significance to the broader economy and the motivation for policy intervention to keep ABS markets afloat. Credit card ABS are a major part of the consumer ABS market, while auto floor plan ABS are a niche product designed to support auto dealers and manufacturers.

How do credit card and auto floor plan ABS work?

Credit card ABS are backed by credit card receivables, made up of annual percentage rate (APR) charges, annual fees, late payment fees, over-limit fees, recoveries on charged-off accounts, and interchange (processing) fees from merchants. Though most of these components are relatively stable, interest income derived from APR charges makes up the majority of the yield, and this income is highly variable.⁴

Auto floor plan ABS help securitize the financing for auto dealer inventory. The financing for auto floor plan ABS involves a revolving credit agreement between the dealer, lender, and manufacturer, and it is secured through a first lien (primary claim) on the dealer's inventory. As the dealer sells the inventory,

a portion of the sales proceeds goes toward repayment of the loan. Alternatively, the loan may be repaid through monthly installments. Lenders are of two types: captive finance companies, which are the auto manufacturers' financing arms that lend to dealers within the manufacturers' dealer networks, and independent finance companies, which are not affiliated with a

specific automaker or dealer network.

In both credit card and auto loan securitizations, the financial institution (also known as the originator, transferor, seller, or sponsor) accumulates a significant volume of receivables, and transfers these receivables to a wholly owned special-purpose entity (SPE). Importantly, these entities are insulated from the lenders' bankruptcy risk. The SPE then transfers the receivables to a securitization vehicle—typically a qualified SPE trust, or QSPE (figure 2).⁵ The trust packages the receivables and issues investor certificates (sold to investors) and trust certificates (retained by the transferor or affiliate and called the seller's interest). Proceeds from the sale of the investor certificates go to the trust. The trust in turn pays the financial institution (seller) for the purchase of the underlying receivables.

The investor certificates are usually issued with a senior/subordinated structure, where the investors in the senior certificates are paid before investors in the junior tranches. The seller/originator often retains the bottom or most subordinated piece or pieces.

A single master trust is used for multiple issues, as illustrated in figure 3, allowing for receivables to be added to the trust over time and multiple "series" of certificates to be issued on specific dates, all backed by a single pool of receivables. Additional series can be offered from the master trust at any time. The cash flow generated from all of the receivables

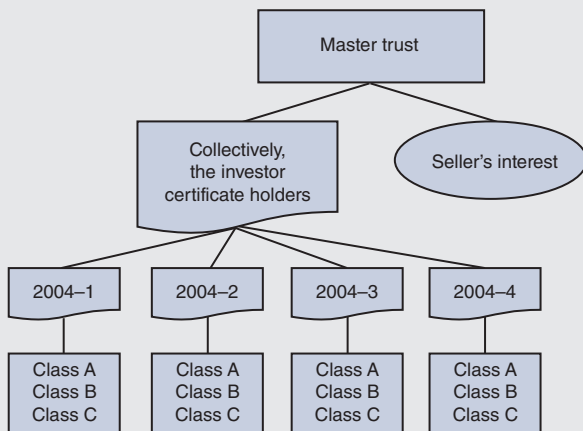
in the master trust is used to fund debt service payments on each series. Master trusts can be set up in two ways: The first method allocates the collections based on the combined needs of all series, and the second allocates them based on the size of the series. Series issued by the same master trust can also share excess finance charge collections. If finance charges allocated to one series are not needed to cover the corresponding interest, defaults, and servicing payments, the funds can instead be applied to absorb shortages in another series.

Trust assets are allocated among current and future note holders, as well as to the seller's interest. The seller's interest represents ownership interest in the trust assets that have not been allocated to any investor certificate holders' interest. ABS and other revolving trust structures are subject to periodic fluctuations in their receivables balances. The seller's interest insulates investors from non-credit-related reductions in receivables resulting from noncash deductions in balances (dilutions). This insulation ensures that the receivables balances are sufficiently high, following dilutions due to charge reversals, fraud, seasonal swings in new receivables generation, and overconcentration amounts of one type of receivable. Credit losses, in contrast, are shared pro rata between the seller's interest and investors. Trusts generally have a specified minimum seller's interest, determined by the rating agencies, such as Fitch, Moody's, and Standard & Poor's, to ensure a base level of collateralization.

Cash flows

The monthly payment rate (MPR) is the principal collected during the month divided by the ending or average principal balance of receivables for the same period. This rate measures the portion of outstanding receivables paid down each month; an MPR of 50% equates to full loan repayment in two months. Transactions with diverse product types often include concentration limits on the type of receivables so that overall portfolio MPR is more predictable. Concentration limits may be placed at retailer, industry, and geographic levels to shield a portfolio's MPR from shocks.

3. Master trust structure for securitization



Source: Federal Deposit Insurance Corporation (2007).

The underlying receivables may have different maturities from the outstanding certificates. For example, credit card securitizations have a relatively short life, typically eight to ten months, while supporting outstanding certificates that may have three-, five-, or ten-year maturities. As a result of this maturity mismatch, each series issued out of the master trust is structured to have a revolving period, followed by controlled amortization or a controlled accumulation period.

The revolving period is established when the series is structured. During the revolving period, the borrowers make monthly principal and interest payments to the servicer. The servicer deposits the payments into two collection accounts—one reserved for the principal and the other for finance charges. Trust expenses are paid from the finance charge account, including interest payments on the investors' certificates. New receivables generated by the designated accounts are purchased from the originating institution/seller with funds from the principal account.

During an accumulation period, principal collections are deposited every month into a note distribution account, or principal funding account (PFA). The principal payments are reinvested in short-term investments and become the collateral for the outstanding investor certificates. As principal payments are received, the short-term investments grow until they equal the amount of

the outstanding investor certificates in the maturing series. At this point, the trustee makes a single (bullet) payment to all investment certificate holders. During a controlled amortization period, principal collections are also deposited into a note distribution account every month, but are paid out to investors monthly throughout the period.

With a high MPR, principal can be accumulated quickly to repay investors and minimize the length of the accumulation or controlled amortization period. If funds in the PFA and accumulation reserve accounts are insufficient to repay investors on the expected maturity date, the accumulation or controlled amortization period will continue until the legal final maturity date. At this time, the trust will sell the remaining receivables to pay investors, if necessary.

Most credit card ABS are structured using controlled accumulation and bullet payments. Auto floor plan ABS are noted for quick loan repayment (20% to 60% MPR), depending on the type of inventory involved.⁶ The liquidity of auto floor plan financing is demonstrated by strong MPR. Thus, auto floor plan ABS are generally structured with an interest-only revolving period followed by a paydown of principal on the expected final maturity date.

Credit analysis

Credit analysis of securitizations includes evaluations of the originator and servicer, an assessment of the collateral, historical asset performance, an understanding of the securitization and legal structure, and modeling of cash flows under various stress scenarios. Rating agencies may employ a "worst-case scenario" approach or probabilistic computer simulations to analyze credit quality.

Credit cards are unique among consumer loans in that the terms of the product

can be changed rapidly. The credit quality of each cardholder is reflected in the cardholder's credit limit and APR. Credit limits and portfolio APRs, however, do not always give a true picture of the issuer's total risk. Some issuing entities might be more aggressive in assigning high limits to lower-credit-quality borrowers. Some might not have well-developed credit scoring models. Others might be offering very low rates to gain market share at the expense of credit quality.

For auto floor plan ABS, bankruptcy and fraud risks are key considerations. Bankruptcy risk comprises bankruptcy of the equipment manufacturers, the finance company, and the dealerships. Fraud includes the risk that the financed equipment is sold out of the trust.

In order to receive higher debt ratings, and thus improve marketability and financing costs, rating agencies require that originators include credit enhancements in securitization structures. Enhancements can be internal, external, or a combination of both. Common external credit enhancement facilities are cash collateral accounts, collateral invested amounts, third-party letters of credit, and reserve accounts. Some internal credit enhancement facilities might include senior/subordinated certificates or excess finance charges.

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In addition to credit enhancements, auto floor plan ABS are often further protected from losses via manufacturer support. This may include repurchase agreements of inventory in the event of dealer default. In that case, both the manufacturer and the dealer would have to default before the trust sustained a loss. Typically, auto floor plan ABS have very low levels of losses, usually in the single basis point range.⁷

The insolvency of an issuing bank will not have a large impact on the flow of

receivables for a geographically diverse credit card ABS portfolio. However, the purchases for a portfolio of credit cards issued from a single retailer, such as a department store, will be negatively affected if the retailer declares bankruptcy. The outstanding principal receivables would then be subject to early amortization.

Various performance events, such as bankruptcy or the failure to pay interest, can trigger an early amortization or accelerated payment of the ABS. For most deals, early amortization is triggered

when the three-month average MPR is less than a predetermined percentage. At that point, all principal collections and any amounts in the PFA are distributed to investors.

Conclusion

Liquid and well-functioning ABS markets are critical to keep credit freely flowing between consumers, firms, and investors. The ABS market augments the banking industry's balance sheet capacity and provides an important source of funding for market participants.

¹ Chris Flanagan, Amy Sze, Brynja Sigurdardottir, and Asif Sheikh, 2009, "Investing in asset-backed securities," JPMorgan, report, March 31.

² Board of Governors of the Federal Reserve System, 2009, G.19 statistical release, June 5, available at www.federalreserve.gov/releases/G19/20090605/.

³ Federal Reserve Bank of Atlanta, 2009, "Financial highlights: ABS," September 16,

available at www.frbatlanta.org/FH_invoke.cfm?objectid=C81A608A-5056-9F12-12510CEA3F2B240F&method=display_body.

⁴ Fitch Ratings, 2006, "U.S. credit card ABS rating criteria and validation study," *Asset-Backed Criteria Report*, October 17.

⁵ Federal Deposit Insurance Corporation, 2007, *Risk Management Credit Card Securitization Manual*, Washington, DC, March, available

at www.fdic.gov/regulations/examinations/credit_card_securitization.

⁶ Juliet Jones, 2003, "Dealer floor plan (wholesale) ABS," Barclays Capital, report, January 31.

⁷ Fitch Ratings, 2008, "Rating criteria for U.S. dealer floor plan ABS," *Asset-Backed Criteria Report*, May 14.