NAIC National Association of Insurance Commissioners & The Center for Insurance Policy and Research

# Capital Markets Bureau Primer

The NAIC's Capital Markets Bureau monitors developments in the capital markets globally and analyzes their potential impact on the investment portfolios of U.S. insurance companies. A list of archived Capital Markets Bureau Primers is available via the INDEX.

## Consumer Asset-Backed Securities Primer

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### Executive Summary

- For the purpose of this primer, consumer asset-backed securities (ABS) are structured finance securities collateralized by pools of auto loans and leases (auto ABS), credit card receivables (credit card ABS) or student loans (student loan ABS [SLABS]).
  - Auto loans, leases and credit cards are typically segmented into three credit sectors: prime; mid-prime; and subprime.
  - Auto ABS, credit card ABS and SLABS accounted for 29% of ABS issuance in 2017.
  - Auto ABS have residual value (RV) risk that is not found in credit card ABS or SLABS.
- ABS comprised 4% of total bonds outstanding in the U.S. as of second quarter 2018.
- Historically, consumer ABS have not been a substantial proportion of U.S. insurers' invested assets.

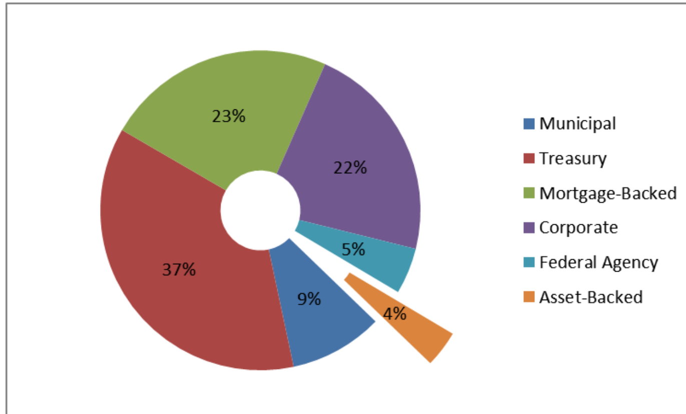
### Background

The non-mortgage ABS market began in the mid-1980s with securitizations of auto loans and credit card receivables. Since then, the sector evolved into a diversified $1.5 trillion market[1] to include a broad category of bonds backed by financial assets.

ABS comprised a small portion (4%) of fixed income securities outstanding as of second quarter 2018 (see Chart 1). ABS are typically segmented into commercial ABS or consumer ABS. Consumer ABS are supported by auto loans, credit card loans or student loans, among other consumer loans/receivables. This primer focuses on auto ABS, credit card ABS and SLABS; "assets" refers to the underlying loans/receivables that comprise ABS collateral.

[1] The Securities Industry and Financial Markets Association (SIFMA), *U.S. Quarterly Highlights, Third Quarter 2018* as of Oct. 8, 2018.

### Chart 1: ABS as Percentage of U.S. Fixed Income Outstanding (Q2 2018)




*Source: SIFMA data as of second quarter 2018.*

## ***Auto Asset-Backed Securities***

Auto ABS are backed by auto loan or lease receivables. Auto loans and leases typically are:

- Fixed simple interest.
- Level-pay installments.
- Payable monthly over a predetermined time frame.
- Structured with terms that typically range from 12 to 84 months.
- Secured by an automobile.

Each installment of an auto loan includes a portion of principal repayment plus interest and fees amortized over the life of the loan. The monthly installment on an auto lease is not for the repayment of principal; rather, it is the difference between the price of the vehicle and the RV of the vehicle at lease end plus interest and fees. RV is the expected fair market value of a vehicle at the end of the lease term.

In addition, the auto finance sector (also applicable to credit cards) is typically segmented into three credit sectors: prime; mid-prime; and subprime (see Table 1). According to Fitch Ratings, a prime borrower has a credit score of at least 680, a mid-prime borrower has a credit score of 640–680, and a subprime borrower has a credit of less than 640. Mid-prime and subprime credit sectors may be consolidated, thereby creating two sectors: prime; and non-prime (or subprime).

**Table 1: Auto ABS – Summary of General Collateral Characteristics**

| | Prime | Midprime | Subprime |
|---|---|---|---|
| Credit Scores/FICO | Commonly above 680 WA FICO | Anywhere from 640–680 | Mostly below 640 |
| Loan LTV | Above or below 100% | More than 100% | More than 100% |
| Loan Term (Months) | Greater than 60 is common; pool may have a majority of longer-term loans | Greater than 60 is common; pool may have a majority of longer-term loans | Greater than 60 is common; pool may have a majority of longer-term loans |
| Loan APR | Below market | Market/risk based | Risk based |
| Vehicle Mix (Majority) | (New)/used | (New)/used | (Used)/new |
| Geographic Mix | Diverse | Diverse/concentrated | Diverse/concentrated |
| Loss Experience | Less than 3% CNL | 3%–7% CNL | Above 7% CNL |

APR – Annual percentage rate. LTV – Loan-to-value ratio. CNL – Cumulative net loss.

*Source: Fitch Ratings.*

### ***Credit Card Asset-Backed Securities***

The securitization of credit card receivables first began in 1987. Credit card securitizations are the primary funding vehicle for unsecured revolving consumer credit. Credit card ABS are backed by credit card receivables (or payments). The receivables amount is typically based on:

- Floating rate interest.
- Minimum payment installment loans (determined by the credit card issuer) and payable monthly until the credit card balance is reduced to zero.
- Unsecured credit.

For credit card receivables, the maturity is determined by the amount paid by the borrower. The borrower may pay the statement balance, current balance or a minimum amount at the due date. The option taken determines the maturity of the credit card loan.

### ***Student Loan Asset-Backed Securities***

SLABS are securities backed by either the U.S. Federal Family Education Loan Program (FFELP) or private student loan ABS (PSLABS). FFELP SLABS are guaranteed against default by a third-party guarantor for 97% to 100% of principal and interest (PI) depending on the loan disbursement date, which is reinsured by the U.S. Department of Education (ED). In addition, FFELP lenders benefit from the ED's special allowance payments (SAPs) and interest subsidy payments (ISPs).

The SAP is the difference between the amount of interest the lender receives from the borrower or the government (in the case of subsidized loans) and the amount that is provided under requirements in the federal Higher Education Act of 1965. The SAP amount, paid quarterly, is calculated as a percentage of the average unpaid principal balance of a loan. ISPs are interest payments made by the ED on behalf of borrowers to lenders during a deferment period or while the borrower is enrolled in school.

FFELP student loans are considered defaulted after 270 days of delinquency. Claims due to reasons other than defaults—such as death, disability and bankruptcy—are eligible to receive a reimbursement of 100% of outstanding PI from the ED.

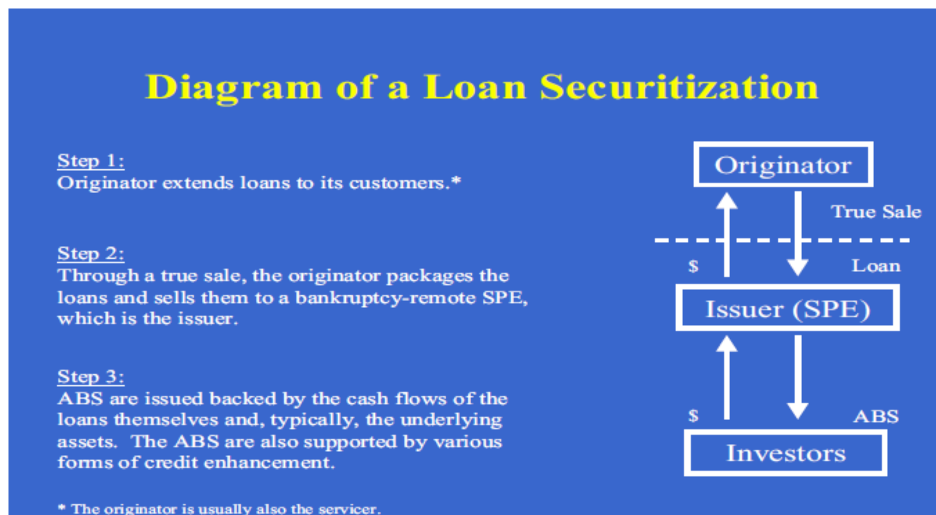
PSLABS are a small portion of outstanding student loans at about 7.8%, according to MeasureOne, an academic data provider. PSLABS are not guaranteed or reinsured by the ED. With higher interest rates, less flexible repayment terms, and lack of deferment or forbearance, PSLABS are mainly used by borrowers as an alternative to FFELP SLABS.

While SLABS are unsecured, student loans are not dischargeable in bankruptcy.

### Asset-Backed Securities Structure

A basic ABS structure is shown in Diagram 1.

### Diagram 1




*Source: Moody's Investor Service.*

- An originator (servicer/sponsor) of auto, credit card or student loans enters into an agreement to transfer receivables (payment of PI from a borrower) to a special purpose entity (SPE).
    - The transfer is a sale of the originator's rights to the receivables to the SPE.
    - The originator receives note proceeds, or cash, from the transfer of its rights.
- The SPE has a single purpose: to issue notes.
    - Proceeds from the issued notes are used to purchase the rights to the receivables.
    - By using the SPE, the receivables are isolated from a potential bankruptcy of the originator.
    - An independent director on the board of the SPE limits the SPE's ability to incur debt or merge with other entities, and the limited purpose and business activity of the SPE aids to establish bankruptcy remoteness.
- ABS investors are paid PI on due dates from payments made on the underlying loans by the borrowers.

Receivables may be transferred from an originator's balance sheet in one step, whereby the receivables are sold to an SPE and the SPE issues notes. However, typically, rights are transferred to an SPE, which, in turn, transfers those rights to a trust (also known as a multi-step transfer). SPEs and trusts are

established to isolate transferred financial assets beyond the reach of the transferor and its creditors, even in the event of a bankruptcy of the transferor.

In order for the transfer of assets to the SPE to be treated as a sale, the transferor must surrender control over the assets transferred and receive compensation for the transferred assets. Control is considered to be surrendered only if all of the following three conditions are met:

- The assets have been legally isolated.
- The transferee has the ability to pledge or exchange the assets.
- The transferor no longer maintains effective control over the assets.

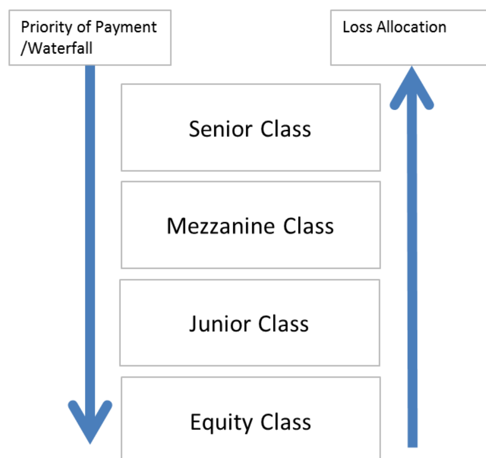
Rather than setting up a new trust for each securitization issued, most originators use a single master trust for multiple issues. A master trust is set up to allow receivables to be added to the trust over time and notes to be issued in a series. Each series has an undivided interest in the designated receivables owned by the trust.

The SPE typically issues multiple classes of notes (or tranches) with different priority of payments. Priority of payment is the order of payment of PI to each tranche. Tranches may consist of a senior, mezzanine, junior and equity tranche. The senior tranche, with the highest priority in terms of payments and the most credit support, has the highest credit rating within the structure.

Auto and credit card ABS notes typically have four- to seven-year maturities, whereas notes issued by SLABS typically have longer maturities, at more than eight years. Amortization is typically on a pro rata basis. Pro rata payment is a proportional allocation of note payments, such that the amount due to each note is an amount proportional to the note's fraction of the total outstanding principal amount on the closing date. Trigger events, such as a decrease in credit enhancement (CE), may switch the pro rata amortization structure to sequential or turbo payment; first to the senior, then the junior classes, followed by equity. Additional trigger events are discussed below.

Losses from defaults are allocated in reverse priority of payment, beginning with equity, then up to the senior class (see Diagram 2). As losses are allocated from the bottom up, the equity tranche is the first loss position. Additional defaults are then allocated to the next class, which is the mezzanine tranche. Typically, each tranche balance is reduced to zero before any losses are allocated to a senior tranche.

### Diagram 2: Priority of Payment and Loss Allocation




#### *Credit Enhancement*

CE cushions investors from losses that may occur due to defaults in the asset pool. Forms of CE include:

- **Subordination** allocates PI first to the senior class then to junior classes. The "ordering" of cash flows from the senior class to the junior class (i.e., the "waterfall") subordinates the junior class relative to the senior class. As the subordinated class, the junior class provides credit support to the senior class by absorbing losses from the underlying asset pool before the senior class.
- **Excess spread** refers to the interest payments and fees received from the asset pool minus the interest payments made to investors, servicing fees and other expenses. Excess spread as CE reduces available spread to zero before losses in the asset pool are allocated first to the equity class then to the debt.
- **Cash reserve account** is an amount held in reserve to absorb any losses due to defaults in the asset pool. Reserve accounts are typically funded by the originator upon the transfer of assets or soon thereafter. Once the notes are issued, the reserve account is typically funded from excess spread.
- **Over-collateralization** is the excess value of the asset pool over the value of debt issued. Losses from the asset pool due to defaults reduce the available over-collateralization until reduced to zero. Any additional losses will then reduce cash flows to the debt.

#### *Representations and Warranties*

Typically, ABS originators provide representations and warranties regarding, for example, the quality of the assets securitized in a transaction. Like other securitizations, there are enforcement mechanisms to remedy a breach of a representation or warranty. These enforcement mechanisms (included in the indenture and other legal documents) are triggered if a breach materially and adversely affects the value of the assets or interest of an investor. Remedies include a reimbursement to the trust by the originator for breaches that have occurred. Typically, transactions require that in the event of a breach of

representations or warranties, receivables either will be repurchased or replaced with receivables that meet the eligibility criteria.

### Risks of Asset-Backed Securities

The main types of risks inherent in ABS (as well as other fixed income securities) are:

- Credit risk (also known as default risk), which is the risk of a financial loss if an obligor does not fulfill its financial obligations according to agreed-upon terms.
- Prepayment risk, which is the risk of an early, unscheduled return of principal on a loan.
- Counterparty risk, in a multi-party transaction, which is the risk that the counterparty (such as a swap provider) will not meet its contractual obligations according to agreed-upon terms. Counterparty risk such as that related to a swap provider is transaction-specific.

If the collateral is actively managed, additional risks may include:

- Market risk, which is the risk of losses resulting from movements in market prices.
- Reinvestment risk, which is the inability to reinvest cash flows at a comparable rate to that of current assets. Reinvestment risk mainly applies to actively managed pools of assets in an ABS transaction with a reinvestment period.
- Liquidity risk, which is the probability of not meeting short-term financial needs. Liquidity risk is derived from the inability to convert assets to cash without a loss of capital or cash flow.

FFELP SLABS, unlike PSLABS, have low credit risk due to an ED guarantee on missed or late payments by student loan borrowers. Prepayment speeds and income-based repayment (IBR) usage can slow down the repayment of loans and, ultimately, affect the speed at which the notes are paid in full. IBR adjusts the required loan payment amount from borrowers. The payment amount may be lowered or not required for a given period of time. According to the transaction documents, SLABS may be subject to an interest cap.[2]

The primary risk in auto ABS is credit risk; that is, the risk that insufficient PI will be generated by the underlying portfolio to make full and timely debt service payments to the auto ABS debt investors. However, unlike auto loan ABS, auto lease ABS also have RV risk. RV risk is the risk that the fair market value of the auto loan at the end of a lease period will be less than the RV. Auto leases may be closed-end or open-end. With closed-end leases, the lessor will realize a residual loss if the vehicle cannot be sold in the open market for at least the contracted RV. In an open-end lease, the RV risk is shifted to the lessee.

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[2] The most common form of an interest cap is the net loan rate cap, whereby interest rates on SLABS are capped at the net yield of the student loans. The interest cap can also take the form of a dollar cap, whereby interest paid to subordinate noteholders is limited to funds available after paying trust senior expenses and senior note interest. Any amount over the cap is typically carried forward and paid after other obligations of the issuer, including full principal payment of subordinate classes and other amounts. The failure to pay this amount in full is usually not defined as an event of default (EOD).

Auto ABS and SLABS, unlike credit card ABS, experience low prepayment risks. For auto ABS, the relatively short-term auto loans (usually 36–60 months) and decreasing RV makes refinancing uneconomical for the borrower, even in a falling interest rate environment. For SLABS, low prepayment risk is due to the usually large balances and an absence of refinancing lenders. Credit cards typically experience higher prepayment from cardholders reducing their balances to zero, rather than making monthly payments.

Basis risk may exist in consumer ABS if there is an index mismatch—i.e., London Interbank Offered Rate (LIBOR) rate versus prime rate—between the loans and notes, or if there are differences in methods of rate determination (daily versus quarterly), rate reset timing and frequency. In addition, a timing mismatch between quarterly assets payment and monthly note interest payment may cause short-term liquidity constraints, especially in a rising interest rate environment.

### *Performance Triggers for Consumer Asset-Backed Securities*

Given that the rated notes are exposed to the performance of the underlying assets, most ABS structures typically include a range of performance-based triggers. Typical performance-based triggers include:

- Three-month average excess spread falling below zero.
- Three-month average monthly payment falling below a stated level.
- Three-month average delinquency ratio exceeding a stated level.
- Failure to pay principal in full on the scheduled maturity date.
- Seller’s participation falling below a stated level.
- Portfolio principal balance falling below the invested amount.

The breach of a performance trigger that goes unremedied according to the indenture may trigger amortization of the notes.

### *Seller and Servicer Triggers*

Notes are exposed to the performance of seller and servicer obligations, and early amortization triggers will often be based on the ongoing performance of such obligations. Typical triggers include:

- Failure or inability to make required deposits or payments as per the legal documents.
- Failure or inability to transfer receivables to the trust when necessary.
- False representations or warranties that remain unremedied, typically for 60 days.
- Certain events of default, bankruptcy, insolvency or receivership of the seller or servicer.

## Key Terminology

**Charge-Off**

With respect to credit cards, a charge-off is a receivable written off as uncollectible. A charge-off may occur either through delinquency or bankruptcy of the cardholder. In most countries, card issuers follow guidelines requiring issuing entities to charge off accounts at 180 days of delinquency and 60 days after notification of the bankruptcy of an obligor.

**Monthly Payment Rate**

With respect to credit cards, the monthly payment rate (MPR) includes monthly collections of principal, finance charges and fees paid by the cardholder; it is stated as a percentage of the outstanding balance as of the beginning of the month. It is an important variable, as it determines how quickly principal is likely to be repaid to bondholders if an early amortization event were to occur.

**Turn-In Rates**

With respect to auto loans, a turn-in rate is the proportion of lessees who do not purchase their vehicle at the end of the lease contract or return the vehicle during the term of the contract. Turn-in rates measure the portion of the lessor's portfolio that is eventually sold in the open market and, hence, exposed to RV risk.

**Clean-Up Call**

The right of a servicer to redeem an ABS (or mortgage-backed security [MBS]) is determined after the balance of the underlying asset pool has declined below a predetermined level (e.g., 10% of its original amount). A clean-up call permits a servicer to terminate its administrative obligations (such as processing monthly remittances to investors and sending monthly reports) when the related servicing fee has been reduced to a level that might not fully cover the cost of administering the transaction.

**Collateral**

Collateral is defined as: 1) assets serving as security for a loan; 2) assets subject to a lien, charge or encumbrance; and 3) assets backing or underlying a securitization. In the case of a loan secured by collateral, if the borrower fails to make required payments, the lender has the right to seize and sell the collateral to recover the defaulted amount.

**Constant Prepayment Rate/Conditional Prepayment Rate**

This is a widely accepted model or framework for describing or measuring prepayments on pools of mortgage loans or other financial assets. For example, 10% conditional prepayment rate (CPR) refers to a constant annual rate of prepayment, such that 10% of the balance of a pool of loans is prepaid during each year.

**Expected Maturity**

With respect to securitizations backed by credit card receivables or other revolving assets, expected maturity refers to the target date for full repayment of principal, even though the legal final maturity may be years later.

**Legal Final Maturity**
In reference to a bond, legal final maturity is the date before which the bond must be retired in order not to be in default.

**Pass-Through**
Pass-through occurs when a security that provides for the distribution of collections or proceeds from specific underlying assets to investors. The collections or proceeds are said to be "passed through" to the investors.

**Principal Balance**
A principal balance is the outstanding amount of a loan or bond; it is the amount that must be paid (with interest and any applicable prepayment penalties) to repay a debt.

**Seasoning**
Seasoning refers to changes in the character of loans or accounts (in the case of revolving receivables) as they age.

**Servicer/Primary Servicer**
A servicer is an entity that collects payments on securitized assets and administers securitization transactions. Administrative duties include processing remittances to investors and transmitting periodic reports to investors, rating agencies and other interested parties. Often, the originator of securitized assets acts as the servicer. In some cases, a primary servicer refers seriously delinquent loans to a special servicer. When assets from multiple originators back a single securitization, each originator might be the primary servicer of the assets that it originated. In such a case, the sponsor of the deal (i.e., a conduit or aggregator) generally would be the master servicer, and each originator would function as a sub-servicer.

**Master Servicer**
A master servicer is a company responsible for making sure that the servicing function is carried out, but which may not actually perform the function itself. A securitization backed by assets from multiple originators often has a master servicer. The master servicer subcontracts the collection functions to other companies. A master servicer generally does not outsource administrative functions, such as processing remittances and preparing investor reports.

**Special Servicer**
A special servicer is a servicer designated specifically to handle collections and foreclosures on delinquent and problematic loans. In transactions that use a special servicer, there is also a primary servicer that handles servicing loans that are current or only mildly delinquent.

**Weighted-Average Coupon**
The weighted-average coupon (WAC) is the weighted-average interest rate of loans backing a securitization. In calculating the WAC of an asset pool, the interest rate of each loan is weighted by its outstanding principal balance. In the case of mortgage loans, the higher the WAC, the higher the prepayment risk on the pool.

**Weighted-Average Life**

Weighted-average life is: 1) used instead of maturity for pricing amortizing securities; and 2) with respect to a security, the weighted-average time to the return of principal on a security. In calculating a security's WAL, each payment date is expressed as the interval (in years) between the time of calculation and the payment date. Each interval is weighted by the amount of principal that will be distributed on the corresponding payment date.

**Weighted-Average Maturity**

The weighted-average maturity (WAM) date of loans backing a securitization is calculated by weighing the balance of each loan's maturity (expressed in years from the time of calculation).