

## TABLE OF CONTENTS

---

I	INTRODUCTION	
	Background	5
	Benefits of Credit Card Securitizations	5
	Risks of Credit Card Securitizations	6
	Principals and Their Roles	6
	Seller	6
	Servicer	6
	Trustee	7
	Investors	7
	Investment Bankers	7
	Third-Party Guarantors	7
	Accountants	7
	Rating Agencies	8
	Underwriters	8
	Manual Structure	8
II	THE SECURITIZATION TRANSACTION (Overview)	
	Introduction	9
	Basic Set-up	9
	The Purpose of SPE and QSPE Master Trusts	10
	The Transaction	10
	Seller's Interest	11
	Cash Flows and Structures	11
	Credit Enhancements	12
	Rating Agencies	12
	Changing Structures	13
III	ACCOUNTING FOR CREDIT CARD SECURITIZATIONS	
	Introduction	14
	Transfer of Assets	15
	Call Options and ROAPS	15
	Determining Gain or Loss on Sale	17
	Servicing Assets and Liabilities	17
	Adequate Compensation	18
	Transactions Accounted for as Secured Borrowings	18
	Initial and Subsequent Measurements	18
	Interest-Only Strip versus Servicing Asset	19
	Interest Only Strips (IO Strips)	19
	Accrued Interest Receivable	20
	Credit Card Securitization Example	21
IV	CASH FLOWS AND CASH FLOW STRUCTURE	
	Introduction	23

	Sources and Uses of Cash	23
	Finance Charges	23
	Principal Payments	24
	Early Amortization	25
	Cash Flow Structures – Master Trust	26
	Finance Charge Allocation	26
	The Risk of Sharing Finance Charge Collections	29
	Principal Allocation	29
	Principal Allocation – Early Amortization	30
	The Risk of Sharing Principal Collections	30
V	DESIGNATION OF RECEIVABLES	
	Introduction	34
	Absorbing Monthly Fluctuations	35
	Representation and Warranties	35
	Eligible Accounts	36
	Eligible Receivables	36
	Tax Consequences	36
	Account Additions	36
	Types of Additions	37
	Risk of Account Additions	37
	Removal of Accounts	37
	Implicit Recourse	38
VI	CREDIT ENHANCEMENT FACILITIES	
	Introduction	39
	Internal Credit Enhancement Facilities	39
	Excess Spread	39
	Spread Account	40
	Senior Subordinated Structure	40
	Over-Collateralization	41
	External Credit Enhancement Facilities	41
	Third-Party Letter of Credit	41
	Cash Collateral Account	41
	Collateral Invested Amount	42
	Surety Bonds	42
	Reserve Account	43
	Early Amortization Triggers	43
	Triggering Covenants Tied to Supervisory Actions	44
VII	COMMERCIAL PAPER BACKED BY CREDIT CARD RECEIVABLES	
	Introduction	46
	Principals and Their Roles	46
	Asset-Backed Commercial Paper Conduit	46
	Sponsoring Bank/Administrative Agent	47
	Seller	47
	Investors and the Market	47
	Support Providers	47
	Rating Agencies	47
	Program Structures	48
	Multi-Seller Program	48

	Single-Seller Program	48
	Fully Supported	48
	Partially Supported	49
	Unsupported	49
	Program Credit Enhancement Facilities	49
	Transaction-Specific	49
	Program-Wide	50
	Liquidity Facilities	50
	Seller-Specific	50
	General (Program-Wide)	50
	Structural Termination Triggers	51
	ABCP Programs and FIN 460R	51
	Regulatory Capital Requirements for ABCP Programs	51
	Liquidity Facility Providers and Risk-Based Capital	52
VIII	RESIDUAL INTERESTS VALUATION AND MODELING	
	Introduction	55
	Accounting Requirements	55
	Cash-Out Technique	56
	Cash-In Technique	57
	Valuation Models	57
	Cash Flows	58
	Modeling Risk	58
	Inappropriate Assumptions	59
	Model Construction	59
	Model Assessment	59
	Evaluation of Model Construction	59
	Evaluation of Model Assumptions	60
	Credit-Enhancing IO Strip	60
	Cash Flow Assumptions	61
	Yield Assumptions	61
	Charge-off Rate	62
	Base Rate	63
	Principal Payment Rate	64
	Discount Rate	65
	Day Count	66
	Excess Spread	66
	Retained Subordinated Bonds	67
	Spread Accounts	68
	Accrued Interest Receivable	69
	Other Residual Interests	69
	Stress Testing	70
	Validation	70
	Back Testing	71
	Summary of Examination Procedures	71
IX	REGULATORY CAPITAL	
	Introduction	73
	Definitions	74
	Recourse	74
	Direct Credit Substitute	74
	Residual Interest	74
	Credit-Enhancing Interest-Only Strip (CE IO Strip)	74
	Credit-Enhancing Representations and Warranties	75

	Clean-up Calls	75
	Ratings-Based Approach	75
	Rating Agency Credit Ratings	75
	Use of Internal Risk Ratings	76
	Qualifying Rating Software	76
	Capital Charges for Residual Interests	77
	Concentration Limit	77
	Dollar-for-Dollar Capital Charge	78
	Implicit Recourse	79
	Accrued Interest Receivable (AIR)	80
X	<b>RISK MANAGEMENT AND EXAMINATION ISSUES</b>	
	Introduction	82
	Assessing the Risk	82
	Credit Risk	82
	Liquidity Risk	83
	Capital Risk	85
	Reputation Risk	85
	Operational Risk	85
	Strategic Risk	86
	Management Responsibilities	87
	Independent Risk Management Function	88
	Valuation and Modeling Processes	90
	Use of Outside Parties	90
	Internal Audit Function or Internal Review	91
	Regulatory Reporting	92
	Market Discipline and Disclosures	92
	Report of Examination Considerations	94
	Capital	94
	Asset Quality	95
	Earnings	97
	Liquidity	98
	Sensitivity to Market Risk	100
XI	Glossary	102

## I – INTRODUCTION

---

### BACKGROUND

Generally defined, the **securitization** of credit card receivables is the process by which these financial assets are transformed into securities. Credit card issuers rely on this type of funding to manage liquidity and capital, to reduce exposure to interest rate risk, and to generate fee income. Because investors look to the securitization structure of underlying assets and credit enhancements rather than to the credit card issuer (selling bank) as a source of repayment, unrated or low-rated credit card issuers may be able to obtain triple-A ratings on the securitized credit card receivables. Thus, a credit card issuer may be able to sell securities with lower coupon rates, and thereby, reducing its funding costs.

The benefits of securitizing credit card receivables can be substantial; however, securitization activities are susceptible to economic influences and present other risks that need to be managed and controlled. Weak underwriting standards, poor servicing, or inadequate liquidity planning are examples of risks, which, if poorly managed can damage a credit card issuer's reputation and cause serious financial problems. This manual is intended to assist examiners in understanding and evaluating the credit card securitization process. The discussions contained in this manual focus on a bank's role as the loan originator and servicer, rather than as an investor, in credit card receivable-backed securities.

### Benefits of Credit Card Securitizations

Securitizations, when used properly, provide financial institutions with a useful funding, capital, and risk management tool. By using securitizations, a credit card issuer may be able to obtain lower cost funding, diversify its funding sources, improve financial indices, potentially lower regulatory costs, and increase its ability to manage interest rate risk. In addition, securitizations may allow banks to reduce asset-class concentrations in the overall portfolio, create underwriting and pricing discipline (provides market feedback regarding asset value), and leverage origination skills and systems capacity by increasing the volume of transactions that pass through the bank. In addition, servicing is often retained by the originator which minimizes customer disruption and enhances fee income.

Securitizations are the largest funding source for credit cards, representing over 50 percent of the industry's funding. Even un-rated or low-rated institutions can obtain investment grade ratings on their asset-backed securities (ABS) since investors look to the securitization structure of underlying assets and credit enhancements rather than the institution for repayment. In contrast, the unsecured corporate bond market is typically a less attractive and less cost-effective funding source as the ratings on the bonds reflect the strength of the institution, which is typically lower, therefore, requiring higher spreads.

Investor acceptance of the credit card ABS has grown considerably as the market has matured. While there are several reasons for increased investor confidence, the use of more sophisticated monitoring and effective credit risk management techniques have and continue to enhanced investors' comfort with these products. Investors are also more attracted to the more subordinated certificates, particularly the triple-B rated issues, often referred to as the Class C market. This increased marketability of the subordinated bonds, particularly during lower interest rate environments and narrower spreads, has resulted in the credit card ABS market being a primary funding tool even more attractive to credit card issuers.

## Risks of Credit Card Securitizations

Realization of the benefits of credit card securitizations, however, requires appropriate risk management processes. The key to a bank's success with using securitizations lies in the quality of the underlying receivables, which is directly related to the underwriting and credit risk management techniques employed. Poorly performing receivables may hinder the bank's access to the securitization market, require higher **credit enhancements** to achieve investment grade ratings, and significantly increase the cost of this funding source.

As a result of securitizing its credit card receivables, a bank creates an accelerated or "paper" earnings and capital under current accounting rules. At the time of the sale, a bank is able to recognize its right to future excess cash flows generated by the sold receivables. In general, this right is reflected immediately in the income statement with the corresponding balance sheet asset presented in the form of a **credit-enhancing interest-only strip (CE IO strip)**. The accounting chapter discusses the mechanics of the gain-on-sale accounting and related interests that continue to be held by the **transferor** in the transferred assets. The CE IO strip is probably the riskiest, most volatile asset on the credit card issuing bank's balance sheet.

Other risks can develop if management is too focused on earnings which may lead to poor origination decisions. In addition, management's incentive to ensure the performance of the securitization may result in "**cherry-picking**," which could eventually lead to a lower quality balance sheet. Banks that have an excessive dependence on securitizations for funding could present significant liquidity issues if this funding source becomes unavailable. Plus, a significant reliance on securitizations may result in a bank outgrowing other alternatives, such as traditional borrowing facilities. These are just a few of the major risks associated with securitizations. These risks, as well as several others, are discussed throughout this manual.

Banks involved in securitization activities, **subprime** credit card securitizations in particular, have experienced a multitude of problems, including some failures. Regulatory agencies have increased oversight of banks involved in credit card lending and securitizations, issued interagency guidance, amended regulatory capital rules, and enhanced examiner training and guidance.

## PRINCIPALS AND THEIR ROLES

The securitization process involves various participants at the inception of the transaction and throughout the life of an issue. Participants include the **seller**, servicer, trustee, investors, investment bankers, third-party guarantors, accountants, attorneys, rating agencies, and underwriters. This section focuses on the roles of the parties typically involved in the securitization process.

### Seller

The seller of credit card receivables is usually a larger financial institution, although there are certain entities that have **Rent-a-Bank Identification Number (BIN)** relationships with insured financial institutions that also sell and securitize credit card receivables. The seller generally retains a small portion of the securitized pool of receivables. The seller is also responsible for selecting an investment banker, establishing the securitization trust, appointing a trustee, and obtaining legal and accounting opinions.

### Servicer

The servicer receives a fee for administering the assets held by the securitization trust. The **pooling and servicing agreement** details the specific duties and responsibilities of the servicer. It also sets forth the fees available to the servicer. The servicer is often the seller but, under certain circumstances, the trustee or an unrelated third party may be appointed as the servicer.

## Trustee

A **Qualified Special Purpose Entity (QSPE)** is established to hold the underlying assets securing the issuance of certificates, and a trustee is appointed by the selling financial institution. The trustee's duties and responsibilities include:

- Ensuring that cash collections (generally daily) forwarded by the servicer to the securitization vehicle's trustee are invested in eligible investments.
- Determining the appropriate certificate rate for variable-rate issues at each repricing date.
- Ensuring that the seller and servicer are in compliance with all legal documents governing each transaction.
- Serving as the collateral agent for the benefit of the certificate holders.

## Investors

The primary investors in credit card ABS are pension funds, insurance companies, foreign banks, large domestic banks, and other investment managers who require predictable cash flows. Credit enhancements and favorable bond ratings tend to eliminate credit quality concerns so investors typically focus on the timing of principal and interest payments of the issue when making investment decisions.

## Investment Bankers

Investment bankers perform two key roles for the seller. First, they assist the seller in obtaining the most efficient funding. Second, they make sure that potential investors have sufficient information to make a sound investment decision.

## Third-Party Guarantors

Third-party guarantors provide credit enhancements such as **cash collateral accounts**, letters of credit, and **surety bonds**. Credit enhancements are intended to assure rating agencies and investors of the likelihood of repayment. Third-party guarantors may be P-1 rated<sup>1</sup> commercial banks or affiliates of the credit card issuing bank.

## Accountants

Accountants are responsible for issuing a comfort letter before the securities go to market. A comfort letter includes information on account selection; their historical performance, including three years of delinquency; and credit loss experience. It also includes the eligibility criteria used for account selection, the number of accounts, the principal dollar amount outstanding, the weighted average **finance charges**, and other composition statistics. The accountants often provide a further break down of the information on credit card receivables, such as by geographic location, account balance, payment rate and status, and credit limit. The accountants also furnish an annual report to the rating agency, the trustee, and the servicer stating that, based on the review of certain documents and based on agreed-upon procedures and Statement on Auditing Standards 70 (SAS 70), a system of internal controls is in effect and that the servicer is adhering to the representations and warranties made in the pooling and servicing agreement. In addition, the accountant attests to the mathematical accuracy of each amount on the monthly investor certificate forwarded by the servicer during the previous year.

---

<sup>1</sup> Moody's short-term debt rating, which reflects a bank with superior ability for repayment of short-term debt.

## Rating Agencies

Rating agencies assign a rating to the issue based on their assessment of the quality of the credit card receivables, the underwriting standards, the collection and servicing processes, and the type and level of credit enhancements. Their assessment includes stress-testing the credit card receivables under different scenarios, including simultaneously decreasing the portfolio yield and the monthly payment rate by a certain percentage and increasing monthly charge offs by some multiple. The rating typically does not address the likelihood of principal and interest being paid by the expected final maturity date or the likelihood of an **early amortization**.

Rating agencies are responsible for monitoring the credit quality and performance of the issues pool of credit card receivables over the life of the security. If deterioration is detected, the rating agencies determine the cause and the seller's ability to correct the problem before downgrading the series' rating.

## Underwriters

Underwriters are typically a syndicate of banks (the lead-managers) that underwrites the transaction, which means they have taken on the risk of distributing the securities. The underwriters typically have the primary role of structuring the transaction and finding investors. If they cannot find enough investors, then they may end up holding some securities themselves. Underwriters make their income from the price difference, or underwriting spread, between the price they pay the issuer for the securities and what they collect from investors who buy portions of the offering. The underwriters are also typically the primary document preparer.

## MANUAL STRUCTURE

This manual describes a typical securitization structure, accounting requirements, cash flows and cash flow structure, designation of receivables, credit enhancement facilities, early amortization triggers, **residual interest** valuation and modeling, regulatory capital, risk management and examination issues, and regulatory reporting. Many of these sections include guidance to assist examiners in evaluating securitization activities. This manual should be used in conjunction with the Risk Management Examination Manual for Credit Card Activities. A variety of terms and industry language is used throughout this manual. The first use of each term included in the glossary is noted in bold and underlined.



## II THE SECURITIZATION TRANSACTION (Overview)

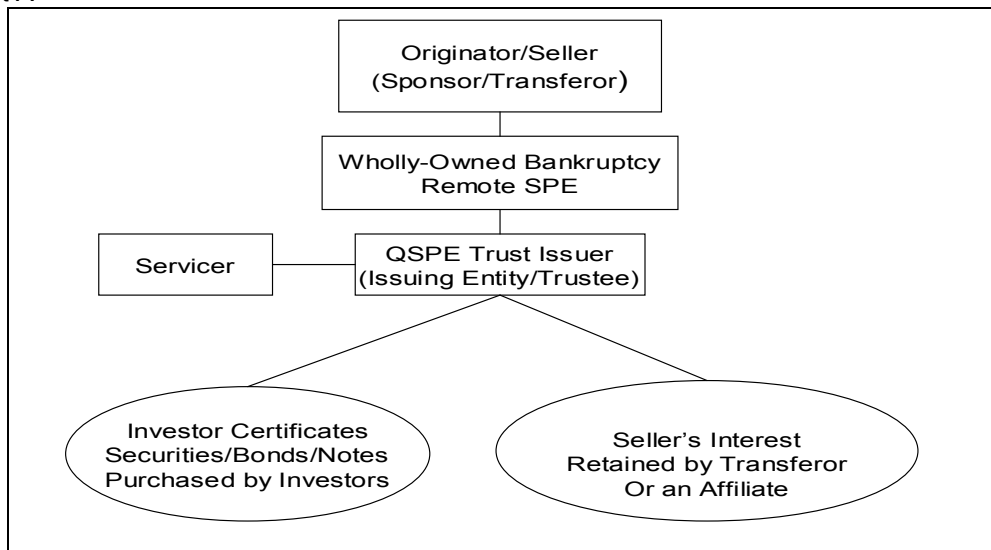
### INTRODUCTION

This chapter provides a basic overview of credit card securitizations. Subsequent chapters go into more detail on the various concepts discussed here. Asset-backed securities (ABS) are bonds backed by financial assets, such as auto loans, mobile home loans, credit card loans, and student loans. In the case of credit card ABS, the bonds (referred to as certificates or ABS in this document) are backed by credit card receivables. While the process of securitizing loans has been around for over 30 years, the securitization of credit card receivables first began in 1987. Since then, the process and structure have evolved significantly, and credit card securitizations currently represent the primary funding vehicle for unsecured revolving consumer credit. Similar to mortgage and other asset securitizations, the financial institution that originates the credit card receivables sells a group of these receivables to a trust. The trust then creates and sells certificates backed by the credit card receivables to investors, which are predominately institutional investors. Very few credit card ABS are marketed to retail customers, primarily due to the complex nature of the transactions and the need to continually monitor various performance indices on the underlying receivables. The underlying credit card receivables generate income to support the interest payments on the certificates.

### BASIC SET-UP

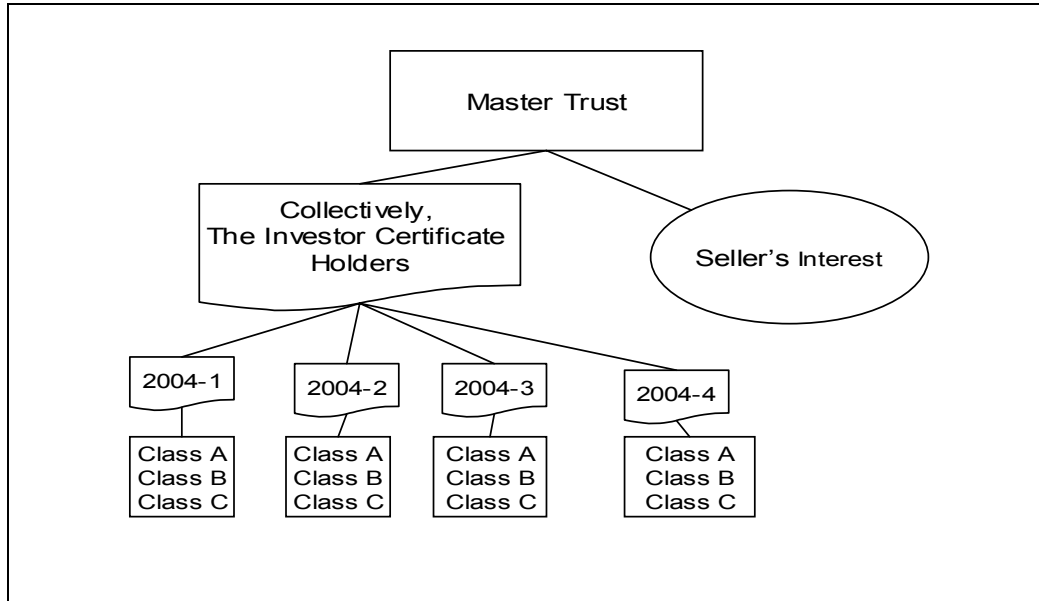
Exhibit A depicts a basic set-up for a securitization. The securitization is created when the financial institution (originator/transferor/seller/sponsor) has accumulated a significant volume of credit card receivables (originated or purchased) and transfers these receivables to a wholly-owned bankruptcy remote **Special Purpose Entity (SPE)**, which then transfers the receivables to a securitization vehicle (typically a QSPE trust). The trust then packages the receivables and issues investor certificates (sold to investors) and trust certificates (retained by the transferor or affiliate). 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 credit card receivables. The investor certificates noted in Exhibit A are typically issued with a **senior/subordinated structure**. The seller/originator often retains the bottom or most subordinated piece or pieces. The trust certificates are also referred to as transferor's interest, seller's certificate, or **seller's interest**.

Exhibit A



Rather than setting up a new trust for each securitization issued, most credit card companies use a single **master trust** for multiple issues, as illustrated in Exhibit B. A master trust is set up to allow for receivables to be added to the trust over time and to issue multiple “series” of certificates identified by specific issue dates all backed by a single pool of credit card receivables in the master trust. The cash flow generated from all of the receivables in the master trust is used to fund debt service payments on each series. As such, each series has an undivided interest in the receivables in the master trust.<sup>2</sup>

Exhibit B



### The purpose of SPE and QSPE Master Trusts

SPEs and QSPE Master 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 transaction to be treated as a sale, the transferor must surrender control over the assets transferred and receive consideration or compensation for the transferred assets. Control is considered to be surrendered only if all of the following three conditions are met:<sup>3</sup>

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

These control requirements are discussed in greater detail in the Accounting Chapter. In addition, the FDIC adopted a *Final Rule on the Treatment of Securitizations and Participations Following the FDIC's Appointment as Conservator or Receiver* (FIL-57-2000), which directly relates to the “legal isolation” concept. Examiners can review this document to gain a greater insight into the FDIC's position regarding this isolation test.

### THE TRANSACTION

In a credit card securitization transaction only the receivables are sold, not the accounts that generate the receivables. The financial institution retains legal ownership of the credit card

<sup>2</sup> Bernstein Research, “*Credit Card Securitization: A Quick Primer,*” May 2002.

<sup>3</sup> Financial Accounting Standards Board, “*Statement of Financial Accounting Standards No. 140, Accounting for the Transfers and Servicing of Financial Assets and Extinguishments of Liabilities.*” September 2000.

accounts and can continue to change the terms on the accounts. Accounts corresponding to securitized loans are typically referred to as the **designated accounts** (or sometimes trust accounts). The initial outstanding balances on the designated accounts are sold to the trust as are the rights to any new charges on the designated accounts. Subsequently, as cardholder purchase activity generates more receivables on the designated accounts, these new receivables are purchased by the trust from the originating institution/seller/transferor. The trust uses the monthly principal payments received from the cardholders to acquire these new charges or receivables. When the securitization is initially set up, the originating institution/seller adds sufficient receivables to support the principal balance of the certificates plus an additional amount (seller's interest) that serves to absorb fluctuations in the outstanding balance of the receivables. The originating institution/seller will make subsequent **additions** to the trust in order to keep the seller's interest at the required level.

## SELLER'S INTEREST

The seller's interest, also referred to as transferor's certificates or seller's certificates, represents ownership interest in the trust assets that have not been allocated to any investor certificate holders' interest. Seller's interest represents credit card receivables transferred to the securitization vehicle but not pledged to back any specific certificates. As a result, the relationship between the seller's interest and the investor certificates is *pari passu*, meaning the holders of the investor certificates and the holder of the seller's interest have the same priority on claims on the underlying collateral. The size of the seller's interest is determined by the rating agencies and serves two primary purposes. First, it absorbs fluctuations in the outstanding principal balances of the designated accounts. Since investor certificates are issued in fixed principal amounts, the seller's interest exists to ensure that there will be sufficient collateral available to support the investor certificates, particularly since cardholder seasonal spending patterns cause balances to fluctuate, and in some months principal payments may exceed new charges on the cards. Second, it is available to ensure sufficient receivables exist following non-cash deductions in balances (**dilution**) due to charge reversals, such as merchandise returns, disputes, and fraudulent charges. Charge-offs are typically shared pro-rata between the seller's interest and the investors' certificates.<sup>4</sup>

The seller's interest is not always "certificated" as the terms seller's certificate or transferor's certificate often imply. In the past, institutions have stated that since the seller's interest represents seller's certificates it should be carried in the investment portfolio versus the loan portfolio; thereby, eliminating the need for an allowance for loan and lease losses (ALLL) against the seller's interest. However, the seller's interest piece does not represent a sale or financing since no proceeds were received for the transferred assets. Instead, the seller received an interest in the transferred assets and this interest should be reflected in the loan category on the financial institution's books.

## CASH FLOWS AND STRUCTURES

Credit card securitizations differ from other ABS since the underlying credit card receivables have a relatively short life, typically eight to ten months, supporting the outstanding certificates, which typically 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** and a **controlled amortization period** or **controlled accumulation period**. During the revolving period, the cardholders make monthly principal and interest payments to the servicer. The servicer deposits the payments into two separate collections accounts, one for principal and one for finance charges. The trust expenses are paid, including interest payments on the investors' certificates, from the finance charge account. New receivables generated by the designated accounts are purchased from the originating institution/seller with funds from the principal account.

---

<sup>4</sup> Deutsche Bank, "The Essential Guide to Credit Card As, Bs, and Cs." January 2001.

The revolving period is for a predetermined period of time that is established at the time the series (often referred to as the “deal”) is structured. Following the revolving period, there is a controlled amortization or accumulation period. During the controlled amortization period, the principal collections are used to pay down the outstanding principal amount of the investor certificates. During controlled accumulation, the principal payments collected are deposited into a trust account and reinvested in short-term investments. These short-term investments become the collateral for the outstanding investor certificates and increase as principal payments are received from the cardholders until the investments equal the amount of the outstanding investor certificates in the maturing series. The investments mature at the same time allowing the trustee to make a **bullet payment** to all the investment certificate holders. Most credit card ABS are structured using controlled accumulation and bullet payments.

Since the designated pool of accounts remains part of the trust, the seller’s interest grows during the amortization or accumulation phase. This is what is meant by the commonly used phrase “receivables come back on the books.” The financial institution or seller does not actually bring the previously sold receivables on the books when the investor certificates mature or during the accumulation period. Instead, as noted, the principal payments received on the sold receivables are accumulated (invested) and ultimately used to payoff the outstanding investor certificates, while the new charges incurred on the designated accounts during the accumulation period become seller’s interest since they are no longer collateral for the investor certificates and as such are reported as loans on the bank’s books.

## CREDIT ENHANCEMENTS

Credit enhancements are required in order to receive higher debt ratings and thus improve marketability and financing costs. Credit enhancements can be either internal or external or a combination of both. The most common external credit enhancements facilities are **cash collateral accounts**, **collateral invested amounts (CIA)**, third-party letters of credit, and **reserve accounts**. The most common internal credit enhancements facilities are senior/subordinated certificates, **excess finance charges**, **spread accounts** and over collateralization. These items are discussed in more detail in the Credit Enhancement Chapter.

## RATING AGENCIES

Credit rating agencies play a large role in credit card securitizations. The rating agencies determine the amount of credit enhancements required for specific credit ratings, the amount of seller’s interest, and account eligibility. The seller can only designate accounts that meet transaction account eligibility requirements as dictated by the rating agencies. Since all series in a master trust benefit from their pro-rata undivided interest in a single pool of credit card receivables, the rating agencies perform their credit analysis on all of the credit card receivables in the master trust for each series issued. Since credit card issuers can add receivables to the trust and change the terms on existing receivables, the credit risk of the underlying collateral in the master trust can change over time. The rating agencies continually monitor the performance of the receivables in trust.

Credit card ABS performance has been very good since these products were first introduced in the late 1980s. A major factor in the favorable performance is because the rating agencies rigorously stress test the various components on the underlying receivables when determining the credit enhancement requirements for each structure. For the highest rating band (triple-A), rating agencies generally stress the assumptions to simulate a negative excess spread and early amortization environment. Credit enhancements are then determined to ensure that the triple-A holders would receive timely and ultimate interest and principal payments even in these highly-stressed scenarios. Lower-rated classes are stress tested under less severe scenarios. For

issues that carry a floating-rate coupon on the investor certificates, the rating agencies stress the underlying index to reflect an increased coupon rate.<sup>5</sup>

## CHANGING STRUCTURES

Credit card securitization structures have evolved to satisfy accounting and tax issues, Security and Exchange Commission (SEC) requirements, and rating agency criteria. Many of these changes are also occurring as banks are motivated to achieve greater funding efficiencies and availabilities. Changes continue today and will certainly continue into the future. For example, several issuers now use a de-linked securitization structure. Under this structure, an issuer could sell a subordinated class, commonly the Class C (triple-B rated notes), prior to the issuance or offering of any more highly-rated classes. This structure gives the bank enhanced market liquidity since conceptually it will be easier for the trust to issue and sell higher-rated classes than lower-rated classes when the need arises. While the market for credit card Class C certificates has been around since the mid-1990s, all classes in a particular series were typically offered at the same time. The evolution of the credit card securitization structure, particularly the concept of a de-linked structure, is greatly expanding the Class C market, creating enhanced market and funding opportunities. With this de-linked structure, issuers are also offering subordinated classes at amounts that exceed the credit enhancement requirements that would be imposed if each Class A certificate was issued with the exact required amount of subordinated classes. As a result, for some issuers, the amount of aggregate outstanding subordinated classes supports the issuance of additional senior classes, creating the opportunity for quick funding access in the senior class market if needed.<sup>6</sup>

Many financial institutions are issuing credit card ABS via complex structures. Bank One created its Bank One Issuance Trust in 2002. That trust accommodates the issuance of certificates on either a stand-alone basis, multiple series basis, or on a de-linked basis out of a single series, and also allows for the creation and subsequent issuance of certificates out of multiple asset pools. Financial institutions are also using collateral certificates, which allow the issuer to have some receivable and cash flow sharing between master trusts, such as when one financial institution acquires another institution that had its own credit card receivables and master trust. In addition, instead of issuing certificates that are fixed as to principal, credit card companies are issuing Variable Funding Certificates with provide for monthly principal settlement, which may increase or decrease the outstanding amount of the principal. This type of structure allows the banks to more efficiently respond to the seasonal fluctuations in funding requirements. As a result of banks' continuing incentive to improve funding access, efficiency, and costs, examiners need to stay abreast of the changing nature of credit card securitization structures.

---

<sup>5</sup> Ibid

<sup>6</sup> Ibid

### III ACCOUNTING FOR CREDIT CARD SECURITIZATIONS

#### INTRODUCTION

This section provides an overview of the accounting criteria for establishing sales treatment under Financial Accounting Standards Board (FAS) Statement No. 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities (FAS 140)*, in the securitization of credit card receivables. FAS 140 was issued in September 2000 and replaces the similarly titled FAS Statement No. 125, but continues to carry over most of the provisions of FAS 125.

Examiners should have a basic understanding of the accounting rules that govern credit card securitization transactions. This section is designed to provide examiners with this understanding, but it is not all inclusive. Examiners should seek the assistance of accounting subject matter experts and regional accountants for additional assistance and resource materials. Examiners reviewing securitization accounting should be familiar with the actual pronouncement and various other resources that offer further implementation guidance. In order to be consistent with the language in FAS 140, this chapter uses the term “transferor” when referring to the financial institution being examined versus the terms originator/seller used in other chapters. Typically, the transferor is also the servicer of the credit card receivables.

FAS 140 applies to all transfers of financial assets after March 31, 2001 by both public and private entities. It is based on a “financial-components” approach, which focuses on legal and physical control of the transferred assets and recognizes that financial assets and liabilities can be separated into a variety of components. Under this approach, an entity recognizes the financial and **servicing assets** it controls as well as the liabilities it incurs. The entity also derecognizes financial assets for which control has been surrendered and liabilities that have been extinguished. FAS 140 is designed to provide consistent standards for distinguishing transfers that are accounted for as sales from those that are accounted for as secured borrowings. There is a common misconception that the entire securitization is either accounted for as a sale or a financing, but a securitization can really be accounted for in one of five ways<sup>7</sup>:

- As a sale (the transferor has no continuing involvement in the transferred assets).
- As a financing (sales criteria is not met).
- As neither a sale nor a financing (when no proceeds are received other than an interest in the transferred assets. For example, selling mortgage loans and acquiring mortgage-backed securities backed by the same mortgage loans or transferring additional credit card receivables to the credit card master trust). The transferor did not receive any proceeds other than a **beneficial interest**<sup>8</sup> in the assets transferred.
- As a partial sale with interests that continue to be held (FAS 140 criteria are met for the sold pieces but the transferor continues to hold servicing rights and/or one or more interests in the transferred assets, typically a subordinated certificate. In this case the transferor is also the investor of the subordinated certificate, which represents a retained subordinated interest and remains on the transferor’s balance sheet but in a different form. The transferor’s rights as an investor of the resultant transferred asset (subordinated certificate) are different than its original rights to the assets (credit card receivables) prior to the transfer. In this case, the transferor, who is also the owner/investor of the subordinated certificates, now bears more than a pro-rata share of losses. This structure is the most common method for credit card securitizations).

<sup>7</sup> See: Deloitte & Touche, LLP, *Securitization Accounting: The Ins and Outs (And Some Do’s and Don’ts) of FAS 140, FIN 46R, IAS 39, and More...*, June 2005 edition.

<sup>8</sup> FAS 140 uses the term “beneficial interest,” which for credit card securitizations typically is in the form of a pass-through ownership interest in the transferred assets. Beneficial interests in the same underlying assets do not constitute having received proceeds for the purposes of FAS 140 (e.g. seller’s interest).

- As a part sale, part financing (when the sold certificates meet sales treatment, but the certificates held by the transferor do not. For example, when the transferor holds a put option on a particular certificate.)

FAS 140 provides consistent standards for determining whether or not a transfer of financial assets constitutes a sale, calculating the gain or loss on the initial transfer of financial assets and/or extinguishment of liabilities as well as gains or losses on subsequent transfers, initially measuring and recording the interests that continue to be held by the transferor in the securitization transaction, subsequently measuring other interests that continue to be held by the transferor, and reporting and disclosing the transactions. It is important to note that the term “transferred assets” is not synonymous with the term “sold assets.”

## TRANSFER OF ASSETS

Paragraph 9 of FAS 140 establishes specific criteria to determine when control of financial assets is surrendered by the transferor. If control is deemed surrendered, those financial assets, other than the beneficial interest, will be accounted for as a sale to the extent that consideration is received in exchange for the assets transferred. Control is considered to be surrendered only if *all* of the following conditions are met:

- The transferred assets have been isolated from the transferor and put presumptively beyond the reach of the transferor and its creditor, even in bankruptcy or other receivership (paragraph 9a). Determining whether or not the securitization isolates the transferred assets requires consideration of available supporting evidence and typically involves the following (paragraph 27 and 28):
  - A two-tier (two-step) transfer approach.
  - Extensive reliance on the concept of legal isolation even in the event of receivership.
  - Legal opinions that support the assertion that transferred assets have been isolated, commonly referred to as “True Sale” or “Non-Consolidation” opinions.<sup>9</sup>
- Each transferee<sup>10</sup> has the right to pledge or exchange the assets or beneficial interest it received and no condition both constrains the transferee or holder from taking advantage of its right to pledge or exchange the asset and provides more than a trivial benefit to the transferor (paragraph 9b).
- The transferor does not maintain effective control over the transferred assets through either (1) an agreement that both entitles and obligates the transferor to repurchase or redeem them before their maturities (paragraphs 47- 49), or (2) the ability to unilaterally cause the holder to return specific assets, other than through a **clean-up call** (paragraph 9c and 50-54).
  - Call options.
  - Removal of account provisions (ROAPS).

## CALL OPTIONS AND ROAPS

Call options and ROAPS allow transferred assets to be reclaimed and must be evaluated to determine whether or not they result in the transferor maintaining effective control over the transferred assets. The unilateral ability to cause the return of specific transferred assets precludes sale accounting because the effective control is maintained rather than surrendered, which is a necessary element to achieve sale accounting.

---

<sup>9</sup> The American Institute of Certified Public Accountants has issued guidance on lawyers' letters in an auditing interpretations called “*The Use of Legal Interpretations as Evidential Matter to Support Management's Assertion That a Transfer of Financial Assets Has Met the Isolation Criteria in Paragraph 9(a) of Statement of Financial Accounting Standards No. 140.*” [AICPA §UA9336.01-.21]

<sup>10</sup> Or, if the transferee is a QSPE (paragraph 35), each holder of its beneficial interest.

An **attached call** held by the transferor could result in the transferor maintaining effective control when the attached call gives the transferor the unilateral ability to cause the holder of a specified asset to return the assets. As such, a call option that allows a transferor to call transferred assets when amortized to a specific balance sheet at the date of transfer would preclude sales treatment only on the portion of assets that can be called, if not considered a clean-up call (discussed below). For example, if a transferor transfers financial assets, but retains a call option on those assets when they have amortized to 25 percent of the transferred balance, that 25% would be considered a financing that would have to be accounted for as a secured borrowing. In addition, a transferor that maintains the ability to call the transferred assets when they amortize to 25 percent of the transferred balance cannot treat the call option as a 10 percent clean-up call and a 15 percent non-clean-up call.

Calls embedded (**embedded call**) by the issuer do not preclude sale accounting because the issuer rather than the transferor holds the call (paragraphs 50-54).

In accordance with paragraph 87, securitization transactions that include the following ROAPS are permissible and do not preclude sales treatment:

- Random removal of excess assets as long as the transferor cannot specify which assets are to be removed.
- Removal of defaulted assets (receivables).
- Removal conditioned upon cancellation by a third-party, or expiration without renewal, of an affinity or private-label relationship.

The specific assets repurchased and the timing of the repurchase is determined by a triggering event, not by the transferor, and the repurchase must take place regardless of the transferor's intent. When the event is triggered, it is viewed as a repurchase of the receivables, which assumes the purchase is made at fair value.

Examiners should keep in mind, however, that a transferor does not have to exercise a call option or a ROAPS for sale accounting to be prohibited. If effective control is maintained by the transferor then sale accounting is precluded. For example, effective control is maintained by the mere inclusion of a call option that gives the transferor the ability to reclaim specific assets for more than a trivial benefit. The FAS 140 implementation guide, noted later, provides a good reference table for evaluating call options and ROAPS.

Clean-up call options are permitted exceptions to the effective control requirements of FAS 140. They are options that represent the transferor/servicer's (only if the transferor is also the servicer) right to purchase the remaining transferred financial assets (credit card receivables) if the amount of the outstanding assets falls to a level where the cost of servicing them becomes burdensome in relation to the benefits of servicing. In the final rule on the *Capital Treatment of Recourse, Direct Credit Substitutes, and Residual Interest in Asset Securitizations*, published in November 2001 and effective January 1, 2002, the Federal banking agencies stated that clean-up calls that are 10 percent or less of the original amount of receivables sold to third parties from the asset pool and that are exercisable at the option of the banking organization are not considered **recourse** or **direct credit substitutes**.<sup>11</sup>

Question 49 of FASB's *A Guide to Implementation of Statement 140 on Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities*, issued in February 2001 and revised in April 2002, discusses sale accounting treatment when calls exist, including an

---

<sup>11</sup> “*Interagency Questions and Answers on the Capital Treatment of Recourse, Direct Credit Substitutes, and Residual Interest in Asset Securitizations*” issued in FIL-54-2002 on May 24, 2002.



illustrative table summarizing FAS 140's provisions for different types of rights of a transferor to reacquire transferred assets.

Upon the completion of a transfer of credit card receivables, assuming the transaction satisfies all the conditions to be accounted for as a sale (paragraph 9), the transferor is required to:

- Derecognize all assets sold from its balance sheet.
- Recognize any assets that are retained or obtained in the transaction.
- Recognize any liabilities incurred in the transaction.
- Initially measure at fair value those assets obtained and liabilities incurred (paragraphs 68-70), or if impractical to determine fair value, apply alternative procedures (discussed later).
- Recognize any gain or loss on the sale in current period earnings.

## DETERMINING GAIN OR LOSS ON SALE

Any interests that continue to be held by the transferor in the transferred assets, such as servicing assets and any other interest retained by the transferor, continue to be carried on the transferor's balance sheet. The transferor must complete a relative fair value allocation process of the previous carrying amounts of the assets sold and the interests that continue to be held by the transferor. In March 2006, FASB Statement No. 156 (FAS 156), *Accounting for Servicing of Financial Assets, an amendment of FAS Statement No. 140*, was issued. Entities could have adopted it as early as January 2006 but must adopt by January 2007. With the issuance of FAS 156, the transferor will no longer include servicing assets or liabilities in its relative fair value allocation model. This manual incorporates the impact of FAS 156, which establishes, among other things, the accounting for all separately recognized servicing assets and liabilities.

Upon the completion of the transfer of financial assets, the transferor must first initially recognize and measure at fair value any servicing asset or liability each time it undertakes an obligation to service financial assets, identify the carrying value of all the elements transferred at the date of transfer (net of loss allowances, if any); identify any interests that continue to be held and any liabilities incurred as a result of the securitization; and estimate the fair value of each element obtained, held, or incurred. Next, the transferor must allocate the previous carrying value of the assets transferred and the interests that continue to be held by the transferor based on their relative fair values. The relative fair value is based on the date the assets were transferred (paragraphs 56-60). Determining whether the assumptions and the valuation model used to determine the fair values are realistic and appropriate is discussed further in the Residual Interest Valuation and Modeling chapter.

In general, proceeds from receivables sales consist of the cash and any other assets obtained, including separately recognized servicing assets, less any liabilities incurred, including any separately recognized **servicing liabilities**. The gain or loss on credit card securitizations is limited to the receivables that have been sold at the inception of the securitization. Likewise, the servicing asset or liability recognized is limited to the servicing of the receivables sold at inception (a bank cannot book a servicing asset on anticipated future receivables to be sold to the trust.) As subsequent smaller monthly transfers occur in the revolving period, gain or loss on sale, beneficial interests, and assets and liabilities continue to be recognized consistent with FAS 140.

## SERVICING ASSETS/LIABILITIES

When the right to service the sold credit card receivables is obtained and contractually separated from the underlying sold receivables, the servicing becomes a distinct and separate asset (or liability). A bank must recognize a serving asset when it contractually agrees to service the receivables as a result of the transfer of its own receivables (which qualify for sales treatment) or acquires or assumes the servicing responsibility from another servicer.

## Adequate Compensation

Typically, when the benefits of servicing assets are expected to be more than **adequate compensation** for the servicing of those receivables, a servicing asset is created (paragraph 62). If the benefit is less than adequate compensation, a servicing liability is created. Adequate compensation is the amount that would fairly compensate a substitute or back-up servicer and includes the profit that would be expected in the marketplace. For example, if a servicer has a contract with another servicer under a back-up arrangement (sometimes required) and the contract states that the back-up servicer will assume the servicing responsibilities for a fee of 200 basis points, then 200 basis points is what is considered adequate compensation. In some cases, the servicer's (typically the seller/transferor) costs exceed what it is receiving in servicing fee income. For example, the servicer is charging 200 basis points to service the sold receivables, and there is a back-up servicing agreement that states the back-up servicer will assume servicing responsibilities under certain conditions for a fee of 200 basis points. In this example, assume it is actually costing the servicer 250 basis points to service the sold receivables. A servicing liability would not be required since the servicer is receiving adequate compensation as determined by the assumed market rate negotiated for the back-up servicer. A servicer's own cost of servicing is not a consideration for determining adequate compensation; rather, adequate compensation is determined by the marketplace. However, typically in a securitization, the benefits of servicing are expected to equal or exceed adequate compensation and most often a servicing asset is created versus a servicing liability. Also, if circumstances change, a servicing asset may become a servicing liability or vice versa.

If using an existing contract with a back-up servicer as support for adequate compensation, the expectation is that the back-up servicer will be performing the exact same responsibilities; nothing more and nothing less. For example, if the back-up servicing contract does not provide for a function(s) that the current servicer is performing, then the back-up servicing arrangement may not be an acceptable comparison to support adequate compensation.

## Transactions Accounted for as Secured Borrowings

Paragraph 62A was added to FAS 140 with the issuance of FAS 156. Paragraph 62A specifies that if the transaction (as long as the transaction does not involve a guaranteed mortgage securitization) does not meet the sales accounting requirements and is instead accounted for as a secured borrowing, a servicing asset or liability is not recognized.

## Initial and Subsequent Measurements

Under FAS 140, as amended by FAS 156, the servicer (this section assumes that the bank being examined is the servicer) must initially identify distinct classes of servicing assets and liabilities that are based on the availability of market inputs used to determine the fair value of the servicing asset or liability and/or methods the bank uses to managing the risks in the securitized receivables. The servicer must then subsequently measure each class of separately recognized servicing assets and servicing liabilities at either their fair value or by amortizing the amounts in proportion to and over the period of expected estimated net servicing income (for servicing assets) or net servicing loss (for servicing liabilities). Different elections can be made for different servicing asset or servicing liability classes. This election can be made at the beginning of any fiscal year, but the servicer cannot later move a class for which it initially elected to subsequently measure at fair value to a class that it elected to subsequently measure at amortized cost.

For servicers that elect the fair value method for subsequent measurements, changes in fair value are reported in earnings. In those cases, for regulatory capital purposes, Part 325.5(f)2 requires that servicing assets be reduced to 90 percent of their fair value when calculating Tier 1 capital.

If the servicer elects to use the amortization method, the servicing assets must be evaluated for impairment at least quarterly, and any time the fair value is less than the carrying amount, the servicer must recognize this deficiency. For purposes of determining whether the servicing asset is impaired, FAS 140, as amended by FAS 156, specifies that the servicing assets be stratified within a class based on one or more of the predominant characteristics of the underlying assets (e.g. asset type, size, interest rate, origination date, terms, geographic location) and this stratification should be fully documented. Any impairment to the servicing asset is determined by the amount at which the carrying amount of a particular stratum exceeds its fair value and is recognized through a valuation allowance for each individual stratum. Servicers should be consistent from one period to the next in selecting the risk characteristics used to stratify the portfolio, estimating the fair value of each stratum, and measuring impairment.

### Interest Only Strip Versus Servicing Asset

It is important to understand and illustrate the difference between servicing assets and **interest-only strips (IO strips)**. As noted, a servicing asset is created when the **contractual servicing fee** received by the servicer exceeds adequate compensation as determined by what a substitute servicer would require. Servicing assets or liabilities, if any, are based on “contractually specified servicing fees” versus the right to excess interest (or IO strips). Contractually specified servicing fees are all the amounts due to the servicer for servicing the underlying receivables. The contract could state that the servicer, as part of its servicing fee, is also entitled to some or all of excess interest collected on the receivables serviced. In this situation, the excess interest collected would be part of the servicing asset. A servicer’s right to receive future interest income that is in excess of the contractual amount is accounted for as a separate IO strip. The following example from Deloitte & Touche, LLP, (Deloitte)’s June 2005 FAS 140 implementation booklet entitled, *Securitization Accounting: The Ins and Outs (And Some Do’s and Don’ts) of FASB 140, FIN 46R, IAS 39, and More...*,<sup>12</sup> illustrates the difference between servicing assets and IO strips:

“Example: Financial assets with a coupon rate of 10 percent are securitized. The pass-through rate to the holders of the SPE’s beneficial interests is 8 percent. The servicing contract entitles the seller-servicer to 100 basis points as servicing compensation. The seller is entitled to the remaining 100 basis points as excess interest. Adequate compensation to a successor servicer for these assets is assumed to be 75 basis points.”<sup>12</sup>

Basis Points			
200	IO Strip = 100 bps		
175			
150			
125			
100		Servicing Asset = 25 bps	
75	Adequate Compensation = 75 bps	Contractual Servicing Fee = 100 bps	
50			
25			
0			

### INTEREST-ONLY STRIPS (IO Strips)

IO strips represent the present value of the expected future excess spread from the sold credit card receivables. IO strips are generally subordinated interests that provide additional credit enhancement to the certificate holders, and therefore, are recorded as an “other asset” on the seller/servicers balance sheet and report of condition. They are often referred to in this manual as credit-enhancing IO strips or CE IO strips. IO strips are created when there is excess interest

<sup>12</sup> Deloitte & Touche, LLP, *Securitization Accounting: The Ins and Outs (And Some Do’s and Don’ts) of FAS 140, FIN 46R, IAS 39, and More...*, June 2005 edition.

and fee income after all servicing costs, credit losses, investor coupon, and any other required fees (such as premiums to a third-party insurer) are paid. Interest and fee income, together referred to as the yield, consist of annual percentage rate (APR) charges and any late fees or other fees (cash advance, overlimit, annual, nonsufficient funds (NSF), etc.). **Interchange fees** are not part of the IO strip calculation. Again, an IO strip can only be created for receivables sold; any interchange fee that may be generated in the future is not a component of a sold receivable, but a component of the account holders' future transactions and possible future receivables at various merchants. Similarly, cash advance fees are also excluded from the IO strip calculation. Cash advance fees are not typically incurred on existing receivables; instead they are incurred at the time the cash is advanced and the receivable is created. The IO strip is calculated based on the anticipated excess spread generated by the sold credit card receivables.

The following is an example of how excess spread is calculated:

APR & Late Fee Yield:	16%
Investor Coupon	( 3%)
Servicing Fee	( 2%)
Credit Losses	( 6%)
Excess Spread	5%

IO strips are initially recorded at allocated cost relative to fair value. The initial recorded amount is then adjusted up or down through earnings (if held in a trading account) or equity via other comprehensive income (if accounted for as available for sale) based on the asset's fair value. The seller/servicer accretes the asset into interest income. The IO strip is reported as an other asset but measured at its fair value, similar to an available-for-sale or trading security, and is periodically assessed for impairment (EITF 99-20). Fair value estimates (and thus any impairment) are based on continual evaluation of the cash flows over the expected life of the IO strip. FAS 140 does not dictate a specific method for estimating fair value of an asset; however, the statement does provide guidance in determining the fair value of an asset. Determining the reasonableness of the fair value calculation's assumptions and technique are discussed in the Residual Interest Valuation and Modeling chapter.

## ACCRUED INTEREST RECEIVABLE (AIR)

The AIR asset represents the transferor's (seller's) subordinated residual interest in cash flows that are initially allocated to the investors' portion of a credit card securitization. Prior to the securitization transaction, the transferor directly owns a pool of credit card receivables, including the right to receive all of the accrued fees and finance charges on those receivables. However, through the securitization process, the seller's right to the cash flows from the collection of the accrued fees and finance charges generally is subordinated to the rights of the other beneficial interest holders. When the seller's (transferor's) right to the AIR cash flows is subordinated, the seller generally should include the AIR as one of the financial components in the initial accounting for the sale of the receivables and in computing the gain or loss on sale.

It is important to understand the close relationship, but also the different characteristics, between AIR and the IO strip. The IO strip represents *future* income to be earned (subject to both prepayment risk and credit risk) whereas the AIR represents interest and fees already earned at a point in time and recognized under accrual accounting (subject to credit risk but not prepayment risk). The AIR typically includes the transferor's residual interest in the investors' portions of the billed but uncollected accrued fees and finance charges as well as the accrued but unbilled fees and finance charges. Initially, the AIR is recorded at its allocated carrying amount, which is typically less than its face amount. Subsequent to the securitization, the AIR should be accounted for on its allocated cost basis. Entities should follow existing applicable accounting standards, including FAS Statement No. 5, *Accounting for Contingencies*, in subsequent accounting for the AIR asset. The AIR is reported as an "other asset" for call report purposes.

The Federal banking agencies issued FIL-131-2002, *The Interagency Advisory on the Accounting Treatment of Accrued Interest Receivable Related to Credit Card Securitizations*, on December 4, 2002. Subsequently, FASB issued a Staff Position (FSP) FAS140-1 (April 2003) entitled, *Accounting for Accrued Interest Receivable Related to Securitized and Sold Receivables under FAS Statement No. 140.* The advisory and the staff position describe the accounting guidance for AIR. In addition, because the AIR is a retained beneficial interest, Emerging Issues Task Force (EITF) Issue No. 99-20 also applies to the subsequent accounting. AIR is discussed further in the Residual Interest Valuation and Modeling and the Regulatory Capital chapters.

## CREDIT CARD SECURITIZATION EXAMPLE

Exhibit C illustrates a simplified example of a credit card transaction and is intended to give examiners a brief overview of the initial accounting treatments for the various elements of the transaction. The example involves issuing two bond classes with a four year maturity.

### Exhibit C<sup>13</sup>

Amount of loans securitized:			\$650,000,000
Net carrying amount			
(Principal – ALLL)		637,000,000	
Servicing asset (fair value)		5,000,000	
Up-front transaction expense		4,000,000	
<i>Series Structure:</i>			
	Principal	Price	Fair Value
Class A	\$500,000,000	100	\$500,000,000
Class B	25,000,000	100	25,000,000
Seller's Interest	125,000,000		125,000,000 <sup>14</sup>
IO Strip			10,000,000
	-----		-----
Total	\$650,000,000		\$660,000,000
Servicing Asset			5,000,000
<i>Calculation of Relative Fair Value:</i>			
	Fair Value	% of TFV	Allocated Carrying Amount <sup>15</sup>
Class A	\$500,000,000	75.76	\$482,591,200
Class B	25,000,000	3.79	24,142,300
Seller's Interest	125,000,000	18.94	120,647,800
IO Strip	10,000,000	1.51	9,618,700
	-----	-----	-----
Total	\$660,000,000	100.00	\$637,000,000

<sup>13</sup> The inspiration for this example is Deloitte & Touche, LLP's, *Securitization Accounting Under FASB 140*, January 2002, but the example was altered to reflect the issuance of FAS 156 *Accounting for Servicing of Financial Assets, an amendment of FAS Statement No. 140*.

<sup>14</sup> For simplicity reasons, the fair value of the seller's interest in this example is assumed to equal book value. In reality, the fair value should be different with management appropriately supporting the fair value.

<sup>15</sup> The fair value is allocated to the net carrying value of the assets, in this case \$637,000,000, using the appropriate percentages (e.g. \$637,000,000 x .7576 = \$482,591,200).

*Calculation of Gain on Sale:*

Cash Proceeds:	\$524,000,000 <sup>16</sup>
Servicing Asset	<u>5,000,000</u>
Net Proceeds	529,000,000
Less: Allocated Carry Amount of Sold Loans (Class A &B)	506,733,500
Gain on Sale	<u>\$ 22,266,500</u>

## Journal Entries:

	Debit	Credit
(1) Cash <sup>17</sup>	\$521,000,000	
IO Strip	9,618,700	
Servicing Asset	5,000,000	
Seller's Interest	120,647,800	
Def. trans. Costs <sup>18</sup>	3,000,000	
Loans (net)		\$637,000,000
Gain on Sale (pretax)		22,266,500
(2) IO Strip <sup>19</sup>	\$381,300	
Other Comprehensive Income <sup>20</sup>		\$381,300

In the past it was common for institutions to inappropriately exclude components from the fair value allocation, particularly AIR (in this example AIR was assumed to equal zero for simplicity purposes) and seller's interests. Errors such as these are less common now, particularly with financial institutions that are actively involved in credit card securitizations. However, new entrants to the securitization arena that do not completely understand the full application of the various accounting requirements may potentially be more likely to having errors.

The recognition of the gain or loss is limited to the receivables that existed at the time of sale. The valuation of the IO strip and servicing asset is also limited to those receivables sold. During the revolving period, new receivables are sold into the trust each month to replace the amount repaid through principal collections. Each of these subsequent sales produces a new gain on sale calculated and recorded each month. The accounting for this process can be very onerous and subject to error, particularly for those institutions that are new to the securitization process. A gain on sale is typically recognized versus a loss because FAS 140 allows for the acceleration of income recognition. When credit card receivables are sold, the seller/servicer is required to recognize the fair value of future interest and fees generated on the sold receivables. In addition, the seller can recognize the release of previously established loan loss reserves.

<sup>16</sup> Cash Proceeds: Fair Value of Class A & B (\$525,000,000) less non-deferred transaction cost (\$4,000,000 x .25) = \$524,000,000.

<sup>17</sup> Class A (\$500,000,000) + Class B (\$25,000,000) – transaction costs (\$4,000,000) = \$521,000,000.

<sup>18</sup> The \$4,000,000 in transaction costs are deferred over the 4 year term of the deal.

<sup>19</sup> Adjust allocated carrying values of interests that continue to be held by the transferor to fair value in accordance with FAS 140 (\$10,000,000 - \$9,618,700 = \$381,300).

<sup>20</sup> Could also be to P&L if interests that continue to be held by the transferor were classified as trading.

## IV CASH FLOWS AND CASH FLOW STRUCTURES

---

### INTRODUCTION

This section discusses the sources and uses of cash generated from the securitized credit card receivables and how these cash flows are allocated within the securitization process. This section also elaborates on the use of finance charge and principal collections, their distribution in the event of an early amortization, the purpose of the revolving period and controlled amortization or accumulation periods, and the significance of excess finance charges.

Cash flow in a credit card transaction begins when the cardholder transacts business with a merchant, vendor, or other participant in the credit card systems. The merchant or participant submits a claim for payment to the institution that issued the credit card<sup>21</sup>. The institution then pays the merchant for the claim and bills the cardholder for the respective charges, creating a credit card receivable. The cardholder then makes monthly payments on the account. Monthly payments vary from either the minimum payment as determined by the credit card issuer to full payments that pay off the entire balance owed on the card. This section uses the term “issuing bank” or “credit card issuer,” which is referring to the financial institution that issued the credit card to the customer. The use of the term “issuing bank” in this chapter should not be confused with the accounting chapter where the term “issuer” referred to the securitization vehicle or QSPE trust who was the issuer of the certificates. The following discussion focuses on how the cash flows are allocated by the securitization vehicle’s trustee to the investor certificate holders, the seller’s interest, and the seller/servicer.

### SOURCES AND USES OF CASH

Credit card receivables generate cash flows each month consisting of cardholder finance charges and principal payments. These cash flows are received by the servicer (who is commonly the selling bank) and immediately transferred to the securitization vehicle that was established for the securitization process. All collections on the credit card receivables are segregated by the servicer and distributed to the securitization vehicle as either amounts collected as finance charges or as amounts collected as **principal receivables**.

### Finance Charges

The finance charges are defined by most pooling and servicing agreements and include interest charges, annual membership fees<sup>22</sup>, cash advance fees, transaction fees (e.g. overlimit and late fees), interchange fees, and any other fees charged to the cardholders for the use of the cards. Institutions are becoming more and more creative in the types of fees charged, as discussed in the accompanying Risk Management Credit Card Examination Manual. Examiners will need to review the pooling and servicing agreements to see what type of finance charges and fees are captured in the finance charge definition and how these are allocated. The term finance charges used in this section refers to all income (fees and finance charges) collected on the account as defined in the specific pooling and servicing agreement. During the life of the series, the finance charges are allocated on a pro-rata basis between the investor certificates and the seller’s interest. As mentioned, the most common type of trust used in the current industry is a master trust.

---

<sup>21</sup> In reality, a merchant would submit the claim to a merchant processing bank (acquiring bank) that would then submit the claim to the issuing bank. The issuing bank then remits the funds to the acquiring bank that then remits the funds to the merchant. See the Merchant Processing chapter in the Risk Management Credit Card Examination Manual for further explanations of this process.

<sup>22</sup> The treatment and allocation of annual membership fees vary and examiners need to review the securitization documents to determine how these fees are allocated.

The finance charges allocated each month to the investor certificates are used to cover monthly trust expenses, usually in the following priority: investor coupon payments, servicing fees, and defaults on principal (losses). Cash flows also may be directed into various accounts, such as reserve accounts or spread accounts, to provide support against potential future cash flow shortfalls. Any remaining or excess finance charges (excess spread) that have been allocated to the investor certificates are typically released back to the seller/servicer at the end of each month. Again, it is important to understand that seller's interest is not considered sold, normally<sup>23</sup> receives its pro-rata share of the finance charges, incurs its pro-rata share of credit losses, is not charged a servicing fee, and is *not* a component of the credit-enhancing interest-only strip (CE IO strip) calculation even though the receivables that represent seller's interests have been *transferred* (but not sold) to the securitization vehicle. This is an important concept to remember when evaluating the bank's calculation of the CE IO strip, which is discussed in the Residual Interest Valuation and Modeling chapter. Exhibit D further illustrates this point.

## Exhibit D

Total Receivables Transferred to the QSPE:	\$12,000,000	100%
Investor Certificates	10,000,000	83%
Seller's Interest (Seller's Certificates)	2,000,000	17%
	Yield/Cost (Annualized)	Investors' Interest (Monthly)
Total Finance Charges Received	15%	\$125,000 <sup>24</sup>
Investor Certificates WAC <sup>25</sup>	4%	33,334
Servicing fee	2%	16,667
Credit Losses	5%	41,667
Excess Spread	4%	\$33,332

The sum of the coupon rates paid on the investor certificates in a particular series and the servicing fee is referred to as the **base rate**. The cash flow available after allocation of the base rate and the trust expenses is known as the excess spread. The pooling and servicing agreement governs how excess spread is to be distributed by the securitization vehicle's trustee.

Excess spread, which represents potential future income streams for the bank, is available to investor certificate holders to absorb credit losses and ensure performance and payment. The amount of prospective income from excess spread depends on factors such as finance charges on cardholder balances, annual membership charges and other fees, interchange income, net charge-offs, serving fees, cardholder payment rates, and coupon rates paid to the certificate holders. Excess spread is based on actual cash collected not on an accrual accounting concept, which is why delinquencies play a factor in the excess spread calculation. While delinquent accounts are not a direct deduction in the calculation, they do reduce the amount of finance charges collected and thus the excess spread since it is based on actual cash received. Finance charges and losses are the key points in assessing the stability of the excess spread and, thus, the volatility of the CE IO strip recorded on the bank's financial statements.

## Principal Payments

Principal payments are also received by the servicer but are accounted for separately and fulfill different purposes during the life of a securitization. As noted in the Securitization Transaction

<sup>23</sup> Examiners should review the securitization documents carefully. In certain instances, the finance charges allocated to the seller's interest has not been pro-rata but a lower percentage if an early amortization event occurs. However, in such cases, as long as the credit losses are shared pro-rata, the seller's interest would not be considered a recourse situation for regulatory capital purposes.

<sup>24</sup> Monthly yield (.15%/12) times the investors' certificates amount (\$10,000,000).

<sup>25</sup> Weighted Average Coupon



(Overview) chapter, two specific periods exist during the life of a credit card securitization: the revolving period and the controlled amortization or accumulation period. The revolving period exists to allow the investor certificates to have a greater maturity than the underlying receivables. The holders of the investor certificates receive only periodic coupon payments during the revolving period. Following the revolving period, there is either a controlled amortization period, which allows for the timely and systematic distribution of principal payments to the investor certificate holders, or a controlled accumulation period, which allows for a bullet principal payment to the investor certificate holders at the end of the accumulation period. Principal payments made by the cardholders and submitted to the securitization trust during the accumulation period are deposited into a **principal funding account**. The principal funding account is invested as directed by the pooling and servicing agreement. The accumulation period may be a fixed or variable period of time, but must have a minimum length of one month.

Principal payments collected on the credit card receivables during the revolving period and any excess principal receivables collected during the accumulation period are used to purchase new credit card receivables generated by the designated accounts, allocated to other series within the master trust, returned to the issuing bank, or a combination thereof.

## EARLY AMORTIZATION

Performance and termination triggers are embedded in the structure of most credit card securitizations. These triggers are intended to protect investors against deteriorating credit quality of the underlying pool of credit card receivables by returning principal to the investors as quickly as possible. The most prominent credit card securitization protective trigger for investors is tied to the excess spread. The triggering amount and calculation can vary but, most commonly is based on the consecutive three-month average excess spread falling to or below zero. Decisions regarding early amortization, or wind down event, are made by the trustee or, under certain circumstances, upon a vote by the investor certificate holders.

During an early amortization event, the revolving period ends and principal payments that have been allocated to the investor certificates<sup>26</sup> are used to pay off the investor certificate holders as they are collected rather than used to purchase new receivables generated by the designated accounts. The time it takes to pay out the various classes of investors is a function of the payment rate of the underlying receivables. The principal received is distributed to the Class A certificate holders first until the Class A certificate holders are repaid in full, then to the Class B certificate holders until the Class B certificate holders are paid in full, and so on for any other classes issued in a particular series. Any cash flow deficiency owed to the Class A certificate holders on a specific distribution date reduces the credit enhancement facility, but not by more than the defaulted amount. Should the deficit owed to the Class A certificate holders reduce the credit enhancement facility to zero, the Class B investment account will be reduced by the deficit, but not below zero, and so on for any other subordinated classes. Should a cash shortfall still exist after all credit enhancements have been extinguished, the Class A certificate holders directly bear the credit and other risk associated with the undivided interest in the pool of credit card receivables. A discussion of how principal cash flows are allocated in a master trust with multiple series is provided later in this chapter.

If a series goes into early amortization, there is an immediate liquidity concern. The securitization vehicle's trustee stops buying replacement credit card receivables since it is now required to use the principal payments collected to begin paying off the investor certificate holders. The credit card issuing bank now has to fund the new receivables without being able to subsequently sell them to the securitization vehicle. The bank has to either find a new funding source (internal and/or external) or start reducing the cardholders' line availability. The latter is not typically a viable option if the bank wants to stay in the credit card business. Longer term, the bank's reputation as a credit card originator or servicer is damaged and its revenue stream is impaired.

---

<sup>26</sup> Similar to finance charges, principal payments collected by the servicer and forwarded to the securitization vehicle are also shared on a pro-rata basis between the investor certificate holders and the seller's interest.

Furthermore, longer-term liquidity and capital implications exist even if the bank can ride out the early amortization event, and the bank will likely incur a premium when it returns to the securitization market for future funding. Fortunately, early amortization events rarely occur.

### CASH FLOW STRUCTURES – MASTER TRUST

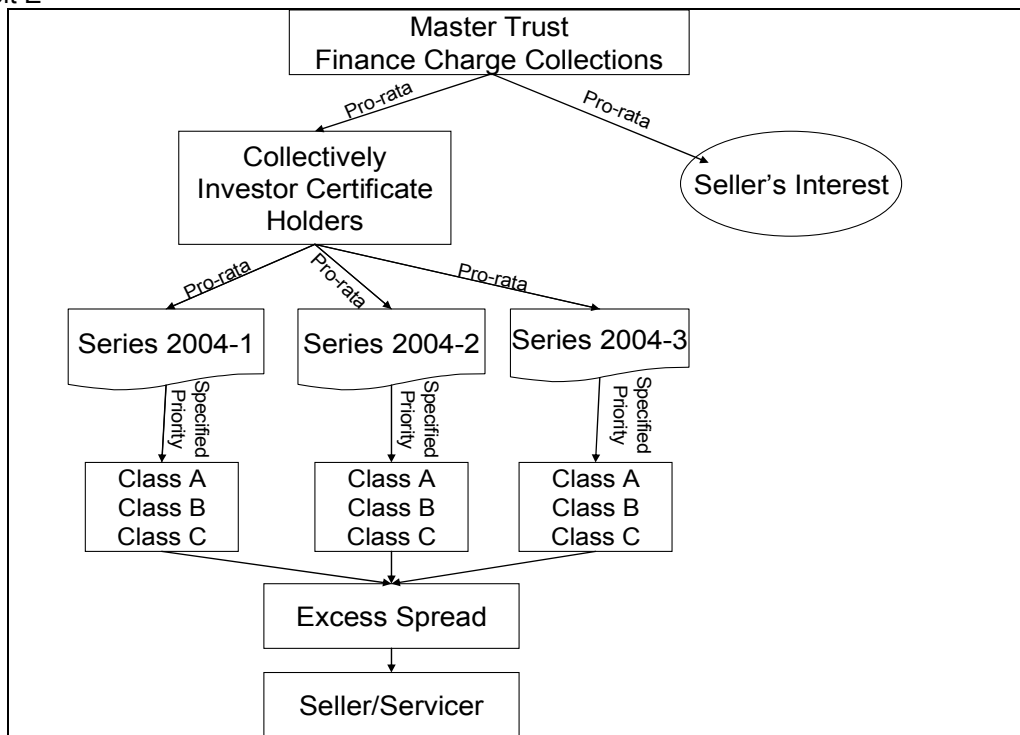
The following section provides information on the more common cash flow structures. It describes how the cash flow from one issue ultimately affects the early amortization risk of other series and can affect the income stream realized by the credit card issuing bank.

A master trust is formed specifically to provide a flexible, cost-effective means of securitizing credit card receivables that is not available to a credit card securitization under a **stand alone trust**. The majority of credit card ABSs are issued out of master trusts. As noted in the Overview chapter, a master trust is set up to issue multiple series of certificates identified by specific issue dates and all backed by a single pool of credit card receivables in the master trust. The cash flow generated from all the receivables in the master trust are used to fund debt service payments on each series. As such, each series has an undivided interest in the receivables in the master trust.

### Finance Charge Allocation

The allocation of finance charges is a multi-step process. The first step is allocating finance charges on a pro-rata basis between the seller's interest and the investors' interests. The second step involves allocating the finance charge applicable to the investor certificate holders on a pro-rata basis among all outstanding series within the master trust<sup>27</sup>. The third step involves allocating the finance charges applicable to each series based on a specified priority<sup>28</sup> to each class within the series. This process is depicted in Exhibit E:

Exhibit E



<sup>27</sup> Finance charge cash flows are based on the size of a series in relation to the sum of all series in the master trust.

<sup>28</sup> The specified priority is dictated by the pooling and servicing agreement.

Most securitizations or series are issued with multiple investor classes, such as the Class A certificates (typically triple-A rated), the Class B certificates (typically single-A rated), and Class C certificates (typically triple-B rated). Many series have more classes, including one or more un-rated class held by the selling institution. The pooling and servicing agreement will dictate the required finance charge cash flow allocation for each class within each series, often referred to as the **cash flow waterfall**. In most cases, the pooling and servicing agreement will allow or require cash flow sharing among the various series in a master trust. In this situation, any excess finance charge cash flows in one series are available to cover any finance charge cash flow shortfalls in another series on a subordinated basis. Exhibit E (above) and Exhibit F (below) are illustrations of relatively simplistic structures. Structures used today by the major issuers have evolved into much more complex structures, but the concept of the cash flow waterfall remains. Nevertheless, it is often challenging to decipher. Prospectuses, prospectus supplements, and pooling and servicing agreements typically use flowcharts to illustrate the structure of the master trust and priority of cash flows.

Exhibit F illustrates the concept of the cash flow waterfall. The example assumes three series are issued within the master trust and each series has three investor certificate classes (class A, B, and C). The example also assumes that the pooling and servicing agreement requires finance charge and principal cash flow sharing between each series.

Exhibit F

Master Trust				\$1,400,000,000
Investor Certificates:				\$1,200,000,000
Seller's Interest:				\$200,000,000
Finance Charge on Underlying Receivables:				15%
Servicing Fee:				2%
Credit Losses:				6%
Series	<b>2004-1</b>	<b>2004-2</b>	<b>2004-3</b>	
	(000)	(000)	(000)	
Investor Certificates	500,000	400,000	300,000	
Class A	250,000	200,000	150,000	
Class B	200,000	160,000	120,000	
Class C	50,000	40,000	30,000	
Class A coupon	4.00%	6.50%	5.00%	
Class B coupon	5.00%	7.50%	6.50%	
Class C coupon	7.00%	9.50%	8.50%	
<b>Step 1:</b>				
Finance Charge Cash Flows Allocated to Investor Certificates and Seller's Interest.				
Seller's Interest Allocated Finance Charge (\$200,000,000 x .15)/12:				\$2,500/month
Investor Certificate Allocated Finance Charge (\$1,200,000,000 x .15)/12:				\$15,000/month
<b>Step 2:</b>				
Investor Certificate Allocated Finance Charges are Allocated on a Pro-rata Basis to the Series.				
<b>Step 3:</b>				
Finance Charges Allocated to Each Series are Allocated on a Specified Priority Basis to Each Class.				

Series	2004-1	2004-2	2004-3
	(000)	(000)	(000)
Allocated Finance Charges	6,250	5,000	3,750
↓			
Class A Coupon	-833	-1,083	-625
↓			
Class B Coupon	-833	-1,000	-650
↓			
Class C Coupon	-292	-317	-213
↓			
Servicing Fee	-833	-667	-500
Class A Credit Losses	-1,250	-1,000	-750
↓			
Class B Credit Losses	-1,000	-800	-600
↓			
Class C Credit Losses	-250	-200	-150
Excess Finance Charges to be shared with other series as need	958	-67	263
From 2004-1	-52	52	
From 2004-3		15	-15
Excess Finance Charges Released to Seller	\$906	\$0	\$248

In Exhibit F, the excess finance charges on 2004-1 and 2004-3 (\$958 and \$263, respectively) are available to cover the shortfall on 2004-2. As such, a second cash flow allocation is made on a pro-rata basis to allocate the available excess finance charges to all series realizing a cash shortfall. The second allocation is based on the size of the available excess spread on all series within the master trust (for this example, the \$958 plus the \$263, or \$1,221 in aggregate). As such, in the example, the \$52 allocated from series 2004-1 to 2004-2 was determined by multiplying the 2004-2 shortfall of \$67 by the percentage of the available excess finance charges attributed to series 2004-1 ( $\$958/\$1,221$ , or 78 percent). Series 2004-3, therefore, would cover 22 percent, or \$15, of series 2004-2's shortfall. After the second distribution of cash flows, \$1,154 (\$906 plus \$248) would be distributed to the seller.

Some pooling and servicing agreements, however, require a portion of the excess cash flows to be allocated to the credit enhancement provider, usually a spread account, before being allocated to other series. Typically, when the excess spread of any particular series falls below a certain threshold, the cash flow received by that series is trapped in a series-specific spread account. If the excess spread on this series then becomes negative, the series-specific spread account makes up the shortfall. The series-specific spread account is replenished by drawing on any surplus excess spreads in other series. If there is still not enough excess spread to meet the contractual requirements for funding spread accounts at this stage, the available excess spread is allocated pro-rata to the series' invested amounts.

Finance charges from one series can only be shared with another after its own requirements have been met. Examiners need to understand the cash flow allocations for each master trust as specified in the pooling and servicing agreement and determine whether the bank is adhering to the requirements as servicer and when applying its valuation models. Ideally, the bank should provide a flow chart depicting how the cash flows are to be allocated for each possible scenario. In addition, examiners should verify that the cash flow valuation models appropriately capture the required cash flow allocations. This concept is discussed further in the Residual Interest Valuation and Modeling chapter.

### *The Risk of Sharing Finance Charge Collections*

The sharing of finance charge collections does not negatively affect the series experiencing excess finance charges, and series with insufficient finance charge cash flow are positively impacted by the subsidies they receive. However, any series receiving a subsidy (cash flow) from another series is subject to credit, variable-rate, and amortization risk.

Credit risk is the risk that the credit quality of the pool of credit card receivables will deteriorate and cash will not be available to support the series. Investors benefit from short-term subsidies where a series' expenses temporarily exceed income and a draw on the credit enhancement is averted. However, if the credit quality of the underlying credit card receivables is deteriorating (due to higher charge offs or lower yields), the increasing size and chronic nature of subsidies may ultimately require a draw on the credit-enhancement facility, possibly triggering an early amortization event.

Variable-rate risk results from differences in the timing of rate changes and cash flows in a transaction. A master trust may contain series that have fixed- and variable-rate investor coupons. If the underlying assets are fixed or are tied to a lagging index, then those series with variable-rate investor coupons will realize less cash flow during upward swings in market rates, thereby reducing the subsidy available to other series or even requiring its own subsidy. Conversely, if the master trust contains series that have fixed-rate investor coupons, but the underlying receivables are variable rate, those series with fixed-rate investor coupons will realize less cash flow during downward swings in market rates, thereby reducing the subsidy available to other series or requiring its own subsidy.

Amortization risk arises when series providing subsidies to higher-cost series are in their controlled amortization or accumulation period. Since either the size of the amortizing series decreases or funds are placed in lower-yielding principal funding accounts (accumulation), finance charge income, and thus the amount available as a subsidy, is reduced. The shorter the controlled amortization or accumulation period, the quicker the subsidy dissipates. Additional support from newly-securitized series would be necessary to sustain the subsidy being provided to the higher-cost series; otherwise, a draw on its own enhancement facility would be required.

### Principal Allocation

During the revolving period, principal collections are used to acquire new receivables from the credit card issuing bank. In a master trust, it is common to have some series in the revolving period while others are in the controlled amortization or accumulation period. Principal collections are distributed to each series in relation to all outstanding series in the master trust. The pooling and servicing agreement will state how the principal collections are allocated. For example, if there is a \$4 billion master trust with four, \$1 billion series issued, cardholder principal payments collected each month will be allocated pro-rata to each series. In this example, each series receives 25 percent of the principal collection and the seller's interest receives 25 percent.

Excess principal collections are generated during both the revolving period and the controlled amortization or accumulation period if principal collections exceed the amount required for distribution to investor certificate holders. The pooling and servicing agreement will designate excess principal receivables as being either available or unavailable to other series. If available, excess principal receivables are distributed to other series within the master trust during their controlled amortization or accumulation period. Excess principal receivables not available to other series is conceptually identical to a stand alone trust where the allocated principal collections for a series cannot be shared with another series to either cover a principal cash flow shortfall or reduce the accumulation period. This type of allocation is less common today. Excess principal receivables available to other series are by far the more common principal allocation method.

This allocation method allows the excess principal collections of one or more series to cover principal cash shortfalls occurring in other amortizing series. However, the availability of funds to purchase newly-generated receivables diminishes when principal collections are shared within a master trust. As with finance charge collections, principal sharing is only allowed after the series has met its own requirements.

Another important feature of principal collection sharing is that the sharing of principal collections can significantly reduce accumulation periods. Seller/servicers attempt to have as short of an accumulation period as possible since the funds held in the principal funding account are invested at lower yields than what is generated by the underlying credit card receivables, thereby reducing finance charge cash flow. By shortening the accumulation period to a few months, issuers can minimize the negative carry typically incurred on the high-quality, short-term investments. Since there are usually many series outstanding at any given time within a master trust, larger issuers have been able to reduce accumulation periods to as short as one month.

Continuing the previous example, assume the \$4 billion master trust had only one series issued for \$1 billion and a principal payment rate of 15 percent. The pool of receivables generates \$600 million in principal collections each month. The series issued has a 25 percent interest in the pool of receivables and therefore receives 25 percent of the total \$600 million collected, or \$150 million each month. In this scenario, the accumulation period would last for approximately seven months. Now assume there are two series issued, each totaling \$1 billion, with the same principal payment rate assumption. Further assume one series is still in the revolving phase while the other is in the accumulation phase. When principal sharing is allowed, the \$150 million in principal collections allocated to the revolving series each month can now be shared with the series that is in its accumulation phase. With the aggregate amount received each month increased to \$300 million under this method, the accumulation period is reduced to four months<sup>29</sup>.

#### *Principal Allocations – Early Amortization*

The principal allocated to a particular series may be greater or lesser than the principal collections needed. For a series in a scheduled or controlled accumulation phase, the principal collections needed are based on the contractual obligation to pay down the investor certificate holders or fund a principal funding account for the benefit of the certificate holders. For a series in an early amortization, the need is the entire investor certificate amount outstanding. In an early amortization event, principal collections are allocated in order of seniority of the investor certificates in a given series, with the Class A holders paid first until they are completely extinguished, then the Class B holders receiving principal collections until they are paid in full, and so on down the class hierarchy. An early amortization event triggered in only one series could impact all series in a master trust since all series are collateralized by the same pool of credit card receivables. All series would suffer from deterioration in the performance of the credit card receivables with any differences attributed to differing coupons. When an early amortization event occurs, all principal collections are applied to the affected series based on a pro-rata basis regardless of their original maturity or whether or not they are in a revolving or accumulation period at the time of the early amortization event.

#### *The Risk of Sharing Principal Collections*

All series in a master trust have both an **expected final payment date** and a **series final termination date**. The expected final payment date is the date the seller expects the final payment of principal and interest to be paid to the certificate holders. A final termination date is the legal date when the final payment of principal and interest must be paid to the certificate holders. The final termination date is usually much later than the expected final payment date thus allowing the seller, and sometimes the certificate holder, to extend the revolving period and/or the controlled accumulation period.

<sup>29</sup> Example from Deutsche Bank, "The Essential Guide to Credit Card As, Bs, and Cs." January 2001.

Since the master trust normally allows for flexibility in sharing principal receivables, the seller can structure securitization activities to keep certain series revolving while other series are in the controlled accumulation period. This enables the seller to use excess principal collections from revolving series to cover potential principal cash shortfalls in amortizing series. However, the risk inherent in that situation is that the series in the revolving period could start amortizing concurrently with other amortizing series thereby eliminating or lessening the amount of subsidy available to the series with the principal cash shortfall.

In these types of structures, the expected final payment date is based on the expected principal collections from all the series within a master trust rather than on the size of one particular series. This technique presents the risk that the actual principal collections on the entire pool of credit card receivables will be less than the expected principal collected, in which case the expected final payment date would not be met.

Many securitizations are structured with variable controlled amortization or accumulation periods due to the uncertainty of principal collections being available to series with short amortization or accumulation periods. In these structures, a calculation is made at the start of the controlled amortization or accumulation period to determine the anticipated sources and uses of excess principal collections. The start of the accumulation period may be extended at the seller's option.

Exhibits G and H are included in the prospectus supplement for Capital One Multi-asset Execution Trust's \$1 billion Class A (2006-4) Card series Notes and are provided as an example to illustrate how cash flows are commonly explained or presented in the offering materials. Exhibit G relates to finance charges whereas Exhibit H relates to Principal.

## Exhibit G

“Finance charge collections and other amounts allocated to the Card series, called Card series finance charge amounts, will generally be applied each month to make the following payments, deposits or allocations in the following priority: “

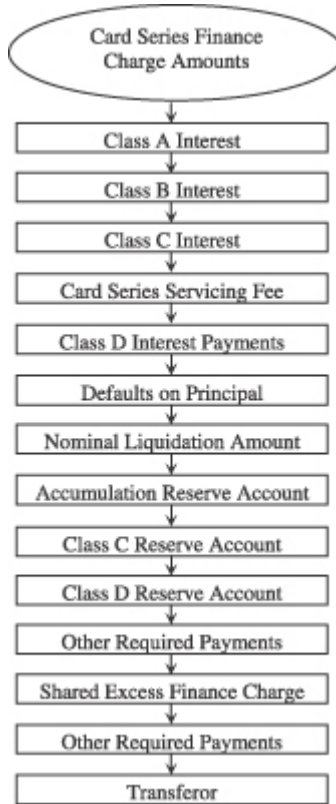
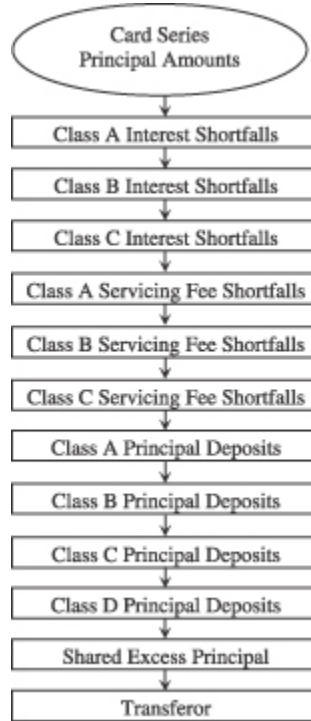




Exhibit H

“Principal collections and other amounts allocated to the Card series, called Card series principal amounts, will generally be applied each month to make the following payments or deposits in the following priority:”<sup>30</sup>



<sup>30</sup> Prospectus supplement for Capital One Multi-asset Execution Trust’s \$1 billion Class A (2006-4) Card series Notes.

---

## V DESIGNATION OF RECEIVABLES

---

### INTRODUCTION

This section provides information on the selection of credit card receivables, the purpose of seller's interest, the rationale for **account additions**, the types of account additions, the general criteria for removing accounts, and the possible existence of **implicit recourse**. It makes many references to account additions or adding accounts. Accounts are not actually added to a securitization trust; rather the credit card receivables arising from additional accounts are added. However, to be consistent with industry terminology, the addition of receivables on added accounts is considered account additions.

At the inception of a securitization of credit card receivables, the bank as the seller selects receivables arising from specific accounts and sells the entire balance of these receivables to the securitization vehicle. The transfer of credit card receivables represents a sale (if the criteria are met for sales treatment under FAS 140) of an undivided interest in the receivables, not the accounts. Ownership of the accounts is retained by the credit card issuing bank. After the initial transfer, all newly-generated receivables from the selected accounts are also sold to the securitization vehicle so that it maintains 100 percent of the receivable balances owed by the cardholders on these designated accounts.

The selling bank first identifies the pool of accounts, from which the initial accounts are selected, based on the eligibility and other specified criteria in the pooling and servicing agreement. Some banks that securitize both prime and subprime receivables establish two separate master trusts, one for the prime receivables and one for the subprime receivables. A master trust containing prime receivables generally issues bonds that contain lower credit enhancement requirements and lower coupons on the investor certificates than a master trust containing subprime receivables. Banks, however, typically include different types of receivables within one master trust. Some banks include all types of credit card receivables in one master trust; prime, subprime, secured, and unsecured.

Since each new series issued out of a master trust has an undivided interest in the pool of receivables in the master trust, the receivables selected for a new series must not significantly alter the credit characteristics of the pool of receivables in the master trust. Once the pool of accounts has been identified, the receivables selected for a securitization should be based on a random or statistical sampling procedure for the applicable pool. Examiners should review the selection process to determine whether it is appropriate. Random selection of receivables is required to ensure that, among other things, there is no systematic selection of higher-quality assets for inclusion in the securitization pool, to the benefit of the investors' interests in the pool and the relative detriment of the seller's interest. However, pools of securitized credit card receivables are generally comprised of thousands of credit card accounts, carrying relatively small balances, and originated in accordance with standard credit underwriting procedures and documentation requirements.

The bank may exclude a portion of its newly-solicited and accepted accounts from the selection process but should not engage in cherry-picking. Each series' prospectus furnishes a description of the receivables, their selection process, and any segment or segments of the loan portfolio that was excluded in the process. Examiners should review this document to determine whether the bank's selection process is consistent with the requirements.

The ownership interest in the pool of receivables transferred to the securitization vehicle is divided between the seller's interest, which is generally retained by the credit card issuing bank, and the investors' interests. All risks and benefits attributable to the receivables are shared on a

pro-rata basis, and, with the exception of a senior/subordinated structure, the seller's interest is not subordinated to the investors' interests. As explained in the next section, the seller's interest serves the following purposes:

- Absorbs monthly fluctuations in the pool of credit card receivables.
- Protects the investors from breach of representation or warranties.
- Insures that the transaction (sale) will be treated as a debt issuance for tax purposes.

## ABSORBING MONTHLY FLUCTUATIONS

Monthly fluctuations in the balance of the underlying receivables occur due to factors such as cardholder principal payments, additional cardholder charges, **attrition**, and dilution. Since all newly-originated credit card receivables arising from the accounts selected for securitization are transferred to the securitization vehicle, the total receivables held by it also fluctuates. The seller's interest is designed to absorb minor receivable fluctuations. The following example illustrates this point:

A bank initially transfers \$1 million of credit card receivables into a securitization trust. The investor's interest is 90 percent, or \$900,000, and the seller's interest is 10 percent or \$100,000. Assume that in the subsequent month, total cardholder principal payments equal total cardholder charges; however, due to attrition and dilution, the total outstanding balance of the receivables falls by \$20,000 to \$980,000. Since the investor's interest is fixed at \$900,000, the seller's portion must absorb the \$20,000 decrease in the pool of receivables. The seller's interest is reduced to \$80,000, which now represents 8 percent (\$80/\$980) of the remaining pool of receivables.

The seller's interest in the securitization trust will equal the difference between the total credit card receivables held by the trust and the amount of the investors' certificates outstanding. Most pooling and servicing agreements require the seller to maintain a minimum interest (generally 5 to 10 percent) in the pool of receivables. Consequently, any factors that decrease the pool of receivables beyond the maximum amount that can be absorbed by the seller's interest require the credit card issuing bank to provide additional accounts to the trust.

## REPRESENTATIONS AND WARRANTIES

In addition to absorbing monthly fluctuations in the pool of receivables, the seller's interest also absorbs declines in receivables as a result of breaches in the credit card issuing bank's representations and warranties. Any breach of representation or warranty results in the removal of all receivables arising from those accounts triggering the breach. The bank's representations and warranties should be the only recourse provision associated with the sale.

Representations or warranties provided by the selling bank typically include the following:

- That the bank was duly incorporated and in good standing and has the authority to consummate the transactions contemplated in the pooling and servicing agreement.
- That the pooling and servicing agreement constitutes a legal, valid, and binding obligation on the bank.
- That the transfer of credit card receivables under the pooling and servicing agreement constitutes either a valid transfer and assignment to the securitization vehicle of all rights, title, and interest of the bank or the grant of a first priority perfected security interest in the receivables.
- That each credit card receivable is an "eligible receivable."

## Eligible Accounts

An “eligible account” is typically defined as any account owned and maintained by the credit card issuing bank that is payable in U.S. currency and has not been identified as either sold, pledged, lost, or stolen. The cardholder must not be involved in bankruptcy proceedings and must have an address located in the U.S., U.S. territories, or U.S. possessions.

## Eligible Receivables

An “eligible” credit card receivable typically must meet the following criteria:

- Arise from an “eligible account.”
- Be created in compliance, in all material respects, with all requirements of law applicable to the credit card issuing bank.
- Have all authorizations, consents, orders or approvals of or registrations or declarations with any governmental authority that are required to be obtained, effected, or given by the bank in connection with the conveyance by the bank of receivables to the trust.
- Have good and marketable title, free and clear of all liens and security interest, at time of creation.
- Have a cardholder payment obligation that is legally enforceable against the cardholder in accordance with the terms of the agreement.
- Constitute an account under Article 9 of the Uniform Commercial Code (UCC).

## TAX CONSEQUENCES

The seller's interest also serves as a mechanism to allow the sale to be accounted for as a debt issuance for tax purposes. Special tax counsel to the credit card issuing bank generally recommends that the institution maintain, at a minimum, between a 5 percent and 10 percent seller's interest to sustain this special tax treatment.

## ACCOUNT ADDITIONS

Accounts are added to the securitization vehicle to maintain the investors' interests in the underlying assets at the prescribed level, establish new series within the master trust, or change the existing credit quality on the aggregate pool of receivables.

The average life of a credit card receivable is generally much shorter than the life of a particular series. The principal payment rate varies month to month, but on average, for the past few years, approximately 15 to 18 percent of cardholder principal balance is paid down each month in a “normal” economy. Accordingly, an average cardholder's receivable balance turns over about every five to seven months. Investor certificates issued in each series are typically interest only with maturities ranging from three to ten years. Therefore, the pooling and servicing agreement must allow for account additions to ensure that the underlying receivables do not shrink to a level below the amount required for the investors' certificates. Credit card receivables represent open-end, revolving credit, and monthly outstanding balances on the designated accounts may vary from month to month due to seasonal spending patterns, changing principal payment rates, dilution, and attrition.

The creation of a master trust allows the bank the flexibility to originate new securitizations without the establishment of a new trust. The pooling and servicing agreement for new series issued under the master trust agreement specifies the amount of additional accounts that must be sold to the securitization vehicle.

The bank can also add accounts to change certain characteristics within the pool of credit card receivables. For instance, the bank may decide to add accounts during periods of high

delinquency rates, low cardholder usage rates, and high cardholder debt repayment rates. However, changes made after the original sale that are designed to improve the performance of the credit quality on a deteriorating pool of credit card receivables may constitute implicit recourse, and, as such, these types of changes should be carefully scrutinized. Implicit recourse is discussed later in this chapter and in the Regulatory Capital chapter.

## Types of Additions

The pooling and servicing agreement determines the extent of additions and mechanisms available to the bank when adding accounts. Common types of account additions are lump-sum additions, required additions, and automatic additions.

- *Lump-Sum Additions* allow the bank to freely add accounts to a securitization vehicle; however, the rating agencies must agree that the addition of accounts will not result in a withdrawal or downgrade in a rating on any outstanding series.
- *Required Additions* are designed specifically to protect the investors from asset shrinkage and allow for the addition of accounts when the pool of receivables decline below the level established in the pooling and servicing agreement. The level required is usually based on the current or the initial amount in relation to all series within the master trust.
- *Automatic Additions* allow the bank to add a limited number of accounts to the securitization trust within a given period of time. The period may be designated as a specific time period (monthly, quarterly, annually), or may be a revolving period. Unlike lump-sum additions, the rating agencies are not required to notify the bank of the effect such additions may have on the ratings assigned to previously issued series.

## Risk of Account Additions

Account additions can alter credit and early amortization risk within a securitized pool of credit card receivables. The pooling and servicing agreement, therefore, includes conditions with respect to the types of account additions allowed. Provisions may include, but are not limited to, allowing only accounts of the same nature as those included as initial accounts, delivery to the securitization vehicle's trustee copies of UCC filing statements covering the new accounts, notification by the rating agencies that the additions do not reduce or withdraw the initial rating assigned, or allowing additions consisting only of eligible accounts as defined in the purchase and sales agreement.

Credit risk is largely determined by the bank's underwriting and servicing standards, its target market, its financial health, and other internal or external factors. Pooling and servicing agreements that allow for automatic account additions, therefore, pose the greatest potential for increased credit risk because such additions are generally limited only by amount and time constraints, with no requirement to consider credit quality implications. On the other hand, lump sum and required additions are less likely to increase credit risk because they must consider the effect additions will have on other outstanding series and because they are made only in response to declines in the level of underlying assets. Lump sum and required additions are generally small in relation to the entire pool of receivables.

In some circumstances where account additions will result in a downgrade of a rating, a bank may prevent the downgrade by increasing the credit enhancement facility of that series. However, this may be considered implicit recourse.

## REMOVAL OF ACCOUNTS

The bank may remove accounts from the securitization trust only as specified in the pooling and servicing agreement and are usually only allowed once a month. The criteria for account removals are unique to each series, but criteria commonly include the following:

- That the removal of accounts will not cause an early amortization event.
- That the removal of accounts will not cause the seller's interest to fall below a specific percentage of the aggregate amount of principal receivables outstanding as specified in the pooling and servicing agreement.
- That the principal receivables of removed accounts will not exceed a specified percentage of the aggregate amount of principal receivables. Clean-up calls that are 10 percent or less of the original pool balance and that are exercisable at the option of the credit card issuing bank are usually not viewed as recourse.<sup>31</sup>
- That the rating agencies be notified of the intent to remove accounts and agree that the removal of accounts will not result in a downgrade of the rating for any series.
- That accounts will not be removed if the delinquency rate within the securitized credit card portfolio is material, with materiality generally defined in the prospectus.

All receivables must be sold without recourse in order for the transaction to qualify as a sale and be afforded favorable tax treatment. Therefore, examiners should be concerned if the bank removes accounts that would ordinarily be considered a repurchase under a normal recourse agreement, such as accounts with high delinquency rates and charge offs. While banks occasionally weed out problem loans from a securitization vehicle in order to avert an early amortization, the practice is discouraged and would warrant critical comment in the report of examination. In general, accounts should be removed only if an inordinate amount of receivables exist in the securitization vehicle or if a bank is exercising a clean-up call option.

## IMPLICIT RECOURSE

Implicit recourse arises from an institution providing post-sale support to a securitization beyond the contract. Banks deemed to be providing implicit recourse are generally required to hold capital against the entire outstanding amount of assets sold, as though the sold assets remained on the books, for risk-based capital purposes. Banks that engage in securitizations have an incentive to avoid early amortization because once an early amortization event occurs a bank may have difficulty accessing the securitization market as a funding source. Examiners should be alert for securitizations that are approaching early amortization triggers, such as a decreasing excess spread below a certain threshold or increasing delinquencies beyond a certain rate.

Examiners should review the pooling and servicing agreement to determine whether the bank limits any post-sale support to that specified in the terms and conditions in the documents. They should also review a sample of receivables transferred between the seller and the securitization vehicle to ensure these transfers were completed in accordance with the contractual terms of the securitization, particularly when the overall credit quality of the underlying receivables has deteriorated. Banks may attempt to improve the credit quality of a securitized credit card portfolio by selling receivables to the securitization trust at a discount from the price specified in the pooling and servicing agreement, exchanging performing receivables for non-performing receivables, or purchasing receivables from the securitization trust at an amount greater than fair value. While banks are not prohibited from providing implicit recourse, such support will generally result in higher capital requirements. The Regulatory Capital chapter provides more information on what constitutes implicit recourse and the ramifications a bank may face if implicit recourse is deemed to exist.

---

<sup>31</sup> “*Interagency Questions and Answers on the Capital Treatment of Recourse, Direct Credit Substitutes, and Residual Interest in Asset Securitizations*” issued in FIL-54-2002 on May 24, 2002.

## VI CREDIT ENHANCEMENT FACILITIES

---

### INTRODUCTION

Credit card securitizations use various forms of credit enhancements to transform the risk return profile of the underlying receivables. Credit enhancements are intended to reduce the credit risk to the investors, thereby increasing the rating on the investor certificates and thus lowering the funding cost to the selling bank. The nature and the amount of credit enhancements are determined by the rating agencies and underwriters. One or more credit enhancement facilities are usually required in order to receive a high enough debt rating to make the certificates readily marketable. Some of the factors the rating agencies consider in determining the required credit enhancement are the expected performance of the specified pool of receivables typically based on credit scores, credit limits, average outstanding balances, portfolio seasoning, consistency of underwriting and collection practices, and historic performance; geographic diversification, and the legal and cash flow structure of the transaction. The types of credit enhancement facilities are then chosen by management after considering costs and market placement factors.

The ratings are assigned to each class in the series based on the credit quality of the pool of receivables, the types of credit enhancement facilities, the servicer's experience, and the legal and cash flow structure of the series. For the highest rating band (triple-A), rating agencies may stress the loss rate assumption to three to five times the expected rate (or some other multiple to create a severe stress environment), and the portfolio yield and payment rates to 30 percent to 50 percent below their respective expected levels to reflect a negative excess spread environment. Credit enhancements are then determined to ensure that the triple-A holders would receive timely and ultimate interest and principal payments even in these highly-stressed scenarios. Lower-rated classes are stress tested at incrementally lower severities. For issues that carry a floating-rate coupon on the investor certificates, the rating agencies stress the underlying index to reflect an increased coupon rate.

Aside from the coupon rate paid to investors, the largest expense in structuring a credit card securitization is the cost of credit enhancements. As a result, issuers are constantly trying to minimize the costs associated with providing credit protection, which can be either internally provided or externally provided. This section describes the internal and external credit enhancements found in most series of securitized credit card receivables.

### INTERNAL CREDIT ENHANCEMENT FACILITIES

Credit enhancements provided by the cash flows generated by the underlying receivables and the securitization structure include excess spread, spread accounts, subordinated classes, and over-collateralization. Accrued but uncollected interest (AIR) serves as another form of internal credit enhancements but securitization documentations do not require a specified AIR amount nor do rating agencies consider AIR when determining total credit enhancement requirements. AIR is discussed in the Accounting, Residual Interest Valuation and Modeling, and Regulatory Capital chapters.

A typical security structure may contain any of the following internal enhancements, which are presented in the general order of priority that is, from the first to absorb losses to the last.

#### Excess Spread

Excess spread represents the first line of protection against credit losses and avoiding early amortization. As such, excess spread represents the primary internal credit enhancement facility

and is built into every securitization. The portfolio yield for a given month on the underlying receivables supporting the investor certificates generally exceeds the coupon paid on the investor certificates, servicing costs, and expected losses. Any remaining finance charges after the expenses are paid is called excess spread and generally reverts back to the seller. The amount of excess spread depends on several factors, including the following items:

- Finance charges collected on cardholder balances.
- The amount of annual membership charges and other fees collected.
- The amount of interchange income collected.
- The delinquency and net charge-off rates.
- Cardholder payment rates.
- The percentage of cardholders with revolving balances.
- Changes in investor coupon rates.

The pooling and servicing agreement establishes whether the excess finance charges from one series will be returned to the seller/servicer or whether they will be made available to other issues within the master trust. Sharing of finance charges is discussed in the Cash Flow and Cash Flow Structure chapter. However, in every instance, excess finance charges are first used to absorb the expenses of a particular series.

Finance charges collected each month after servicing and coupon expenses are paid are used to reimburse investors for their pro-rata share of monthly charge-offs, and as previously noted, provide the investors with the first line of defense against credit losses. To protect against the possibility of insufficient finance charges to cover all trust expenses, including charge-offs, in the future, the rating agencies require additional forms of credit enhancements as discussed next.

### Spread Account

While finance charges generated from the underlying pool of receivables are available to cover credit losses in any given month (*current* losses), any excess spread generated each month generally reverts back to the seller/servicer. However, pooling and servicing agreements commonly require the funding of a spread account when certain performance ratios on the underlying receivables deteriorate to or beyond a specified level. Rather than the excess spread reverting back to the seller/servicer, the excess spread is instead captured or “trapped” in a spread account to provide the investor certificate holders protection against *future* credit losses. For series that allow for finance charge sharing, excess finance charges are usually made available to other series in the master trust only after the required spread account for the specific series is funded. At the series’ maturity, any unused portion of the spread account is released to the bank.

### Senior/Subordinated Structure

A senior/subordinated structure establishes two or more classes of ownership within a series and is sometimes referred to as tranching. Senior/subordinated structures are layered so that each position benefits from the credit protection of all the positions subordinated to it. The junior positions are subordinated in the payment of both principal and interest to the senior positions. The more senior classes are usually sold to institutional investors and the most subordinated piece is typically retained by the selling bank. A common structure is a Class A that is triple-A rated, a Class B that is single-A rated, a Class C that is triple-B rated, and an unrated class. The selling bank may retain the unrated class and may retain one or more of the other rated subordinated classes. When the selling bank retains a subordinated class, this asset is reflected as another asset on the bank’s balance sheet and considered a residual interest for risk-based capital purposes. The Regulatory Capital chapter discusses how these assets are treated for regulatory capital purposes.



The size of the subordinated certificates or classes is determined by the rating agencies. The subordinated classes are smaller than each senior certificate but are in amounts that are sufficient to protect the holders of the most senior certificates from the possibility of future cash flow shortfalls.

Rating agencies may require some form of additional credit enhancement facility (besides the excess spread which is included in every deal) even when the series has a senior/subordinated structure. However, the amount of additional credit enhancement will be much smaller than would otherwise be required. A smaller additional credit enhancement facility is one of the advantages of a senior/subordinated structure, but disadvantages include fewer cash proceeds to the selling bank and a higher level of on-balance sheet assets when the bank retains one or more of the subordinated classes.

The senior/subordinated structure continues to evolve, and, as a result, examiners should stay abreast of changing industry structures.

### Over-collateralization

Over-collateralization occurs when newly-generated receivables exceed monthly cardholder principal payments and accounts lost to attrition and dilution. From an investor's perspective, over-collateralization is represented by the seller's interest, which is subordinated for purposes of absorbing dilution but not for purposes of absorbing credit losses. Seller's interest ensures that the securitization trust has sufficient assets to generate adequate interest and fee income to maintain the coupon yield. Most cash flow structures do not allow for the subordination of seller's interest to the investors. Over-collateralization in credit card securitizations typically only provides a receivable base for declines in principal receivable balance on the investor certificates and is not a source of credit enhancement.

## EXTERNAL CREDIT ENHANCEMENT FACILITIES

External credit enhancements insulate investors from credit risk, generally through mechanisms other than redirecting internal cash flows or the securitization's structure. The following section provides discusses the types of external credit enhancement facilities available to issuers.

### Third-Party Letter of Credit

A third-party letter of credit is an unfunded commitment granted by a third-party provider that guarantees limited protection against losses, typically catastrophic losses, on the underlying assets. Issuers of letters of credit are obligated to honor demands for payment up to the amount specified in the pooling and servicing agreement. The credit enhancement is normally set at a fixed percentage of the investors' certificates and is usually determined by the perceived credit risk in the underlying assets. A letter of credit may also require a spread or reserve account.

The advantage of using a letter of credit is the additional analysis done on the originating bank and servicer by the third-party credit-enhancement provider. However, letters of credit expose investors to the risk that the investor certificates will be downgraded when the letter of credit provider is downgraded. A letter of credit is also more expensive than a cash collateral account or a collateral invested amount (both discussed next); therefore, its use as a credit enhancement facility is limited.

### Cash Collateral Account

Some industry experts categorize cash collateral accounts (CCA) as internal credit enhancements, but for the purposes of this manual, they are viewed as external credit enhancements because they are typically not created from the cash flow of the underlying

receivables or as a result of the securitization structure. A CCA is a segregated trust account, funded at the time a series is issued, that can be used to cover shortfalls in interest, principal, or servicing expenses if the excess spread falls below zero. The account can be funded by the issuer, but is most often funded by a loan from a third-party bank (or an affiliate), which will be repaid only after holders of all classes of investor certificates of that series have been repaid in full. The loan is generally priced using a specified index plus a fixed spread. The pooling and servicing agreement dictates the amount of the CCA, which is typically based on a specified percentage of the investor certificates issued in a specific series.

CCA have evolved from the earlier transactions that used letters of credit as a credit enhancement. To eliminate the event risk of the letter of credit provider receiving a rating downgrade, which could cause the investor certificates to also be downgraded, the securitization vehicle's trustee borrows the required credit support amount from a commercial bank (or an affiliate) and places the funds in a CCA at closing. Under this type of enhancement, the securitization vehicle's trustee enters into a loan agreement with the third-party. Excess finance charges are used to pay interest on the CCA loan that was obtained to fund the CCA prior to being released to the seller.

Examiners need to be aware of the existence of a CCA when identifying the cash flow waterfall and assessing the valuation of any CE IO strips created from anticipated excess spread. Typically, the required interest payment to the CCA provider is near the bottom of the waterfall. If the securitization performs well, the cash collateral provider is repaid its principal from the CCA itself as the transaction amortizes and the need for this credit enhancement curtails. If the securitization does not perform well, the cash collateral provider will only be repaid after all holders of the investor certificates that are senior in priority are paid in full. CCA can be set up to support either all or only some of the classes in a series. For example, the CCA can be collateral for the rated classes, but may or may not serve as a credit enhancement for the un-rated, most subordinated classes. Again, the securitization documents will identify the exact payment priority and subordination.

### Collateral Invested Amount

Similar to a CCA, the third-party credit enhancer lends money to the securitization trust, but instead of putting the funds into a CCA, the proceeds are used to purchase an undivided ownership interest in the securitization trust's assets (the underlying receivables). The collateral invested amount (CIA) is also referred to as the C tranche and is typically rated triple-B. Often, a Class C bond is issued instead of using a CIA and typically carries the same triple-B rating as the CIA. With a CIA, the cash flows allocable to the collateral invested holder are used to repay the interest and principal on the loan.

The CIA is an un-certificated, privately-placed ownership interest in the trust, subordinated in payment rights to all investor certificates. Like a layer of subordination, the CIA serves the same purpose as a CCA, making up for cash shortfalls if the excess spread is negative. The CIA itself is often protected by a separate cash collateral account and available excess spread. If the CIA absorbs losses, it can be reimbursed from future excess spread if available. Like the CCA, the CIA is usually a designated percentage of the investor certificates plus any cash collateral interest. The advantages of the CIA include a wide range of investors and no downgrade risk associated with a third-party provider.

### Surety Bonds

Surety bonds are guarantees issued by third parties, usually triple-A rated, mono-line insurance companies. Surety bond providers generally guarantee (often referred to as a wrap) the principal and interest payments for specified investor certificate classes. The cost of this guarantee is determined by the insurance company's perceived credit risk in the underlying receivables. Surety Bonds are more prevalent in subprime credit card securitizations. The monthly premium

for this insurance can increase on subsequent series issued out of a master trust if the performance of the underlying receivables is deteriorating. Certain issuers have seen this premium more than double as credit quality deteriorated.

## Reserve Account

A reserve account is established to ensure distribution of principal and interest on the certificates as required in the pooling and servicing agreement. The bank may have the option of funding the reserve account with an initial cash deposit or through the retention of specific periodic distributions of principal or interest otherwise payable to the investors. The amount required in a reserve account may be stated as either a percentage of the senior certificates or any other amount designated by the bank.

## EARLY AMORTIZATION TRIGGERS

Revolving credit card securitizations use early amortization triggers as a way of protecting investors from deterioration in asset quality. Early amortization events and servicer default triggers are typically defined in the general prospectus and the prospectus supplement for each series issued, the pooling and servicing agreement, or the insurance agreement if a third-party insurance company guarantees the transaction. Early amortization triggers accelerate the repayment of the investor certificates' principal ahead of their scheduled maturity. This accelerated repayment method requires that the investors' share of all principal collections be returned immediately when they are received by the securitization vehicle's trustee.

A prospectus supplement typically discusses the terms and structure in greater detail and may use different terms and references than those specified in this manual. For example, terms including early redemption events, events of default, events of default remedies, and pay out events have been used to describe early amortization events.

Typically, early amortization events are tied to quantitative factors performance metrics. The following list provides examples of some early amortization triggers or events (the first one being the most common), but it is not all inclusive:

- If for any month, the average of the excess spread amount for the three preceding calendar months is less than the required excess spread amount for the month (e.g. excess spread falls below zero for three consecutive months).
- The triggering of an event of default or early amortization trigger in any series, class, or tranche issued out of the master trust (e.g. cross early amortization clause).
- Failure to pay the investors in full by the expected final maturity date.
- Default by the servicer (default would be defined in the pooling and servicing agreement).
- Seller's interest falling below a specified required amount (for example, 7 percent).
- Insolvency or bankruptcy of the seller or transferor.
- The trust is deemed to be an investment company for purposes of the Investment Company Act of 1940.
- Material breach of any seller representation or warranty.
- Third-party downgrade.
- Merger or acquisition.

Other possible early amortization event triggers could be based on the performance of the underlying receivables, such as a delinquency or charge-off rate trigger, a portfolio yield trigger, or a payment rate trigger.

The aforementioned early amortization or early redemption triggers are generally self-explanatory; however, the following discussion is offered as further explanation for a few of the triggers mentioned.

Since each series has an undivided interest in the pool of underlying receivables, the triggering of an early amortization event in any series signifies some degree of deterioration in the underlying collateral. An early amortization event triggered by the excess spread falling below zero for three consecutive months may occur in one series but not in others if the weighted average coupon rate paid on the one particular series is greater than rates paid on others. However, since the only difference in excess spread from one series to the next is typically the coupon rate or perhaps a third-party fee, all series backed by these same receivables will be experiencing the same deterioration in yield, losses, or a combination of both. As a result, most deals now require a cross early amortization clause in order to protect the investors of all series issued out of the master trust.

A servicer default typically refers to the servicer failing to perform its duties as dictated in the pooling and servicing agreement; specifically:

- Failing to make required payments or deposits on time.
- Failing to perform its required duties, and such failure causes a material adverse impact on the investor certificate holders for an extended period.
- Making non-permitted delegations.
- Conveying incorrect representations or warranties which cause a material adverse impact on the certificate holders for an extended period of time.
- Becoming insolvent or bankrupt.

A merger or acquisition trigger enables the investors to opt for an early amortization in the event the credit card issuing bank is acquired by another institution. A merger or acquisition trigger protects the investors from the prospects of adverse underwriting or servicing standards by the acquiring institution. Recent mergers, however, reveal that if these types of triggers exist, they are not always exercised.

### Triggering Covenants Tied to Supervisory Actions

On May 23, 2002, the Federal banking agencies issued FIL-53-2002, *Interagency Advisory On The Unsafe And Unsound Use of Covenants Tied to Supervisory Actions In Securitization Documents*. This guidance was issued after examinations uncovered structures with early amortization or servicing transfer covenants tied to supervisory actions or thresholds, such as CAMELS ratings, capital category, and written enforcement actions. Any contractual provision that could result in early amortization or the transfer of servicing due, directly or indirectly, to the occurrence of a supervisory action or event are subject to this advisory.

Negative safety and soundness implications exist if covenants link supervisory actions or thresholds to the triggering of an early amortization or the transfer of servicing. Triggers related to supervisory actions can result in a bank experiencing an early amortization event at a time when its ability to access other funding sources is limited, thereby resulting in liquidity problems. Such triggers also could potentially inhibit supervisors from taking actions intended to cure problems at a troubled bank because those actions activate a trigger that could cause a worsening of the condition or failure of the bank. Also, triggers premised upon the action of banking supervisors could result in an early amortization event when the supervisory action is linked to events that have limited or no relevance to the performance of the underlying assets. Also, covenants related to supervisory actions may obligate bank management to disclose confidential examination information.

Examiners should review securitization documentation to determine if covenants related to supervisory actions or thresholds exist. Covenants that provide for the early termination of the transaction or compel the transfer of servicing due, directly or indirectly, to the occurrence of a supervisory action or event should, under appropriate circumstances, be criticized as an unsafe and unsound banking practice.

Consistent with the FIL, most banks have modified existing documents to remove these covenants, and new securitizations typically do not contain these types of covenants. However, banks new to securitizations may not be aware of the interagency advisory.

## VII COMMERCIAL PAPER BACKED BY CREDIT CARD RECEIVABLES

---

### INTRODUCTION

Asset-backed commercial paper (ABCP) conduits issue short-term notes backed by trade receivables, credit card receivables, or medium-term financial assets with an original maturity of 270 days or less. A specific pool of assets collateralizes the paper. The conduit usually acquires an undivided interest in revolving pools of assets rather than the assets themselves. The paper is repaid by the cash flow generated by the underlying assets and the issuance of new commercial paper. Since most commercial paper conduits mature in less than 90 days, the primary repayment source comes from the roll-over or the re-issuance of existing paper. In addition, the conduit may draw on **liquidity facilities** to repay maturing paper if there is a cash flow shortfall or timing issue. As with other securitization activities, ABCP enables the bank to utilize existing balance sheet receivables to provide funding and improve financial indices. Larger banks often sell credit card receivables through commercial paper conduits to warehouse excess receivables until another issue can be executed within the master trust.

ABCP conduits are similar to asset-backed securitizations but they have certain very important differences. These differences include investing in revolving assets that fluctuate in size; investing in various types of assets, creating a more diversified collateral pool; and funding longer-term assets with short-term liabilities, which can create a cash flow mismatch and a need to rely on other liquidity facilities for repayment of the commercial paper. In addition, there are no scheduled amortizations for the paper issued by the conduit since the issuance of additional paper can, and is often expected, to be used<sup>32</sup>.

This chapter describes the principals and their roles, various program structures, program credit enhancement facilities, liquidity facilities, **structural termination triggers**, accounting requirement impacts, and regulatory capital rules.

### PRINCIPALS AND THEIR ROLES

#### Asset-Backed Commercial Paper Conduit

An ABCP conduit is an entity established by the sponsor for the purpose of issuing commercial paper backed by credit card receivables and other asset types. ABCP conduits are usually minimally capitalized SPEs that are structured to be bankruptcy remote. The ABCP conduit's activities are limited by the legal documents that established the conduit. The conduit serves as a shell company and contracts out for trustee, depository, commercial paper placement, and administrative agent services. It uses the cash proceeds from the issuance of the commercial paper to purchase and acquire legal title to the underlying assets. In a commercial paper program, there may be several SPEs, as noted in Exhibit I. Typically, the transfer of assets involves an intermediate SPE and then this SPE assigns the receivables or its rights to the receivables to the conduit (similar to the two-step process that occurs in a securitization). As with securitizations, this set up is designed to isolate the assets from the seller in the event of the bankruptcy of the seller. The SPE that actually issues the commercial paper is referred to as the ABCP conduit.

---

<sup>32</sup> Source: Fitch Ratings, Asset-Backed Criteria Report: "Asset-Backed Commercial Paper Explained," November 8, 2001.

## Sponsoring Bank/Administrative Agent

For the purposes of this section and for regulatory capital rules, a bank is considered the sponsor of an ABCP program if it establishes the program; approves the sellers permitted to participate in the program; approves the asset pool to be purchased by the program; or administers the program by monitoring the assets, arranging for debt placement, compiling monthly reports, or ensuring compliance with the program documents and with the program's credit and investment policy.

## Seller

Commercial paper backed by assets, including credit card receivables, is issued by the ABCP conduit. The bank sells the underlying receivables to the conduit (or an intermediate SPE) but, as with other securitization activities, retains ownership of the accounts and usually retains the servicing rights. The bank remits to the conduit all finance charges and principal receivables associated with the credit card receivables, and the conduit uses those funds to pay interest, to purchase more credit card receivables, or to retire maturing paper. The bank may use commercial paper backed by credit card receivables as a revolving line of credit and/or use it as a mechanism to warehouse excess receivables until another securitization can be executed.

## Investors and the Market

Commercial paper is usually sold in denominations of millions of dollars to meet the requirements of the money markets and large institutional investors, but it may be sold in denominations as small as \$10,000.

## Support Providers

Credit risk and liquidity risk are inherent in any ABCP program. Credit risk is the risk that credit losses on the underlying assets will create inadequate collections to retire the maturing paper. Liquidity risk is the risk that cash flows on the underlying assets will not be received in a timely manner to retire the issue. Support providers eliminate or reduce those risks by supplying liquidity and credit enhancement facilities in a commercial paper transaction. Support providers are generally unrelated third parties selected by the bank. The liquidity facility and the credit enhancement facility may be provided by the same or different entities.

## Rating Agencies

Rating agencies are responsible for assigning an initial rating and for monitoring the commercial paper throughout its life. The structure of the transaction determines what the rating agencies will evaluate when assigning a rating. For instance, in a fully-supported transaction, the rating agencies will evaluate the creditworthiness of the support provider rather than the creditworthiness of the underlying assets. As such, the rating of a fully-supported issue usually parallels the short-term rating of the support provider. For a partially-supported structure, the rating agencies:

- Determine if the underlying assets will support repayment of the paper at maturity.
- Evaluate the bank and its relationship with the conduit.
- Assess the allocation of risk between the liquidity facility and the credit enhancement facility.

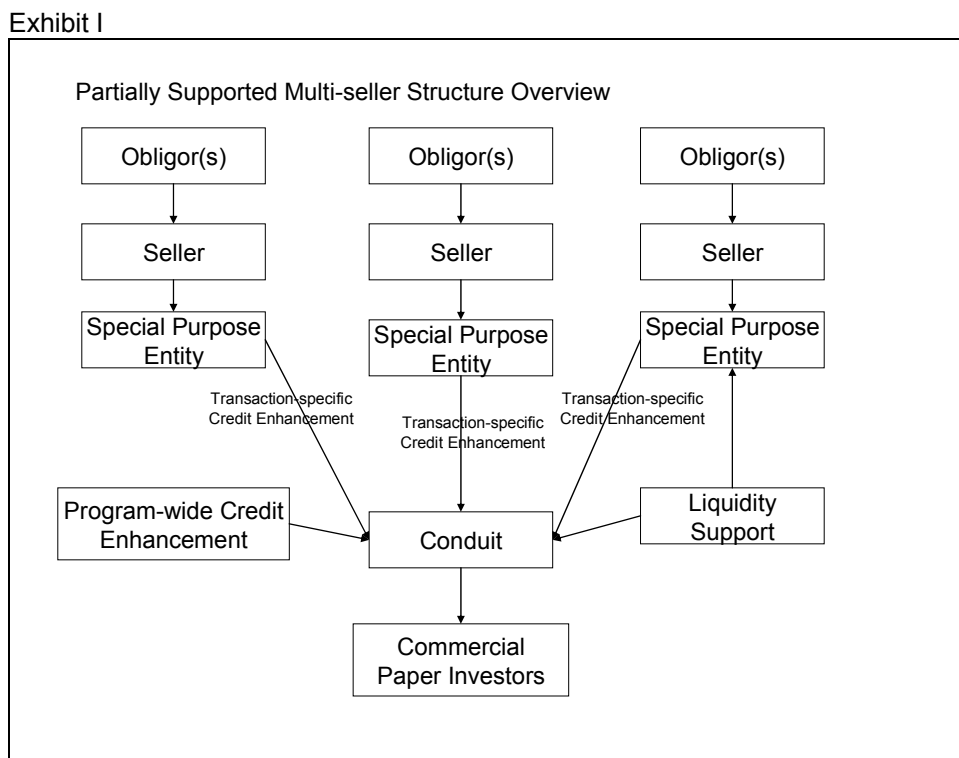
Regardless of the type of structure or the focus of the evaluation, the rating assigned will be based on a determination as to whether the investor(s) will receive full and timely payment on their investment, at maturity, without the aid of rolling-over an existing issue. Fully-supported and partially-supported issues are discussed in the next section.

## PROGRAM STRUCTURES

Generally there are three types of program structures: a multi-seller, a single seller, and a securities-backed program. The first two types of programs are discussed in this manual. The third program, the securities-backed program, encompasses a more complex situation where the sponsor, typically a financial institution, is seeking arbitrage opportunities or capital relief by moving assets off its balance sheet. These programs invest in existing securities, including ABS, corporate bonds, and MBS, rather than directly in credit card receivables.

### Multi-Seller Program

In a multi-seller program, the conduit purchases a variety of assets from many different entities for one specific asset-backed commercial paper issue. A multi-seller program may be fully supported, partially supported, or unsupported. Exhibit I illustrates a partially-supported, multi-seller structure<sup>33</sup>:



### Single-Seller Program

In a single-seller program, the conduit purchases receivables from one entity for one specific asset-backed commercial paper issue. A single-seller program may be fully supported, partially supported, or unsupported.

### Fully Supported

A fully-supported commercial paper program ensures that the investors will receive full and timely payment on their investment at maturity without regard to the cash flows or the value of the credit card receivables. In a fully-supported program, the liquidity facility and the credit enhancement

<sup>33</sup> Source: Fitch Ratings, Asset-Backed Criteria Report: "Asset-Backed Commercial Paper Explained," November 8, 2001.



facilities are housed as one vehicle and the support provider bears all the credit and liquidity risk. A fully-supported program may be directly or indirectly supported, but both insure full and timely payment on the issue. Investors seek payment directly from the support provider in the event the issue cannot be retired at maturity under the directly supported program while an indirectly supported program only requires the support provider to purchase the credit card receivables in the program at a price to fully retire the issue, or to make loans to the conduit secured by the credit card receivables in an amount to fully retire the issue.

### Partially Supported

A partially-supported program is designed so the investors bear a portion of the credit risk in the transaction. The credit enhancement facility in a partially-supported structure will cover losses up to a certain percentage of the total credit card receivables in the program. Credit losses in excess of that percentage are borne by the investors. Some programs have structural termination triggers that require a payout should more than a specific percentage of the credit enhancement facility be exhausted. This percentage usually ranges between 20 percent and 50 percent. The credit enhancement facility may also be designed to address liquidity risk, but in no event is the liquidity facility used to address credit risk. The liquidity facility is expected to fund only the amount of the non-defaulted receivables in the event of insufficient cash flows.

### Unsupported

ABCP may also be unsupported. An unsupported program has neither a liquidity facility nor a credit enhancement facility, and the investors directly bear all the risk. According to Moody's published standards, an unsupported structure can receive a Prime-1 rating if the conduit has assets of 10 or fewer borrowers who are Prime - 1 rated and the commercial paper issued are maturity matched to the assets.

## PROGRAM CREDIT ENHANCEMENT FACILITIES

Credit enhancements provide investors with protection against credit losses stemming from the underlying receivables. Credit enhancements can either be transaction-specific, program-wide, or a combination of both. Either of these enhancements can be provided internally or externally. When a program has both transaction-specific and program-wide credit enhancements, the transaction-specific enhancements absorb the first loss while the program-wide enhancements absorb losses that exceed the amount of the transaction-specific credit enhancement.

### Transaction-Specific

Transaction-specific credit enhancements provide the first layer of protection against a specific transaction and cannot be used to provide protection against credit losses on other transactions within the conduit. The ratings agencies will usually size these enhancements based on the risk characteristics of the underlying assets. The higher the credit risk in the underlying receivables, such as with subprime receivables, the higher the required credit enhancements. Transaction-specific credit enhancements consist of over collateralization, recourse to the seller, loss reserves, third-party guarantees, or any other type of enhancement that is acceptable to the rating agencies.

Over collateralization represents the excess amount of credit card receivables held or transferred to the conduit over the face amount of the outstanding commercial paper. The amount of over collateralization required will vary depending on the asset quality of the credit card receivables and is often specified as a multiple of historical losses, adjusted for current market conditions.

## Program-Wide

A program-wide credit enhancement facility is designed to cover all assets sold into the commercial paper program. This type of facility is typically provided by a letter of credit, surety bond, irrevocable loan facility, or other similar facility acceptable to the rating agencies in which a third party agrees to absorb credit losses attributed to the assets. The facility is typically sized to obtain a minimal acceptable rating for the commercial paper (typically A1 or P-1)<sup>34</sup>.

In a multi-seller program, the program-wide credit enhancement facility cross collateralizes all assets and, therefore, may be larger than any one seller's exposure in the program. A credit enhancement facility may also be used for liquidity purposes. However, in most instances, the liquidity facility must be exhausted or otherwise become unavailable prior to the credit enhancement's use for liquidity purposes.

## LIQUIDITY FACILITIES

The purpose of the liquidity facility is to fund cash flow shortfalls on the commercial paper when mismatches occur in the underlying assets or when there is a disruption in the capital markets. Unlike credit enhancements, liquidity facilities are generally not associated with or used to compensate for credit risk in the underlying receivables. The liquidity facility may take many forms, such as a revolving loan agreement or an unfunded loan commitment, but the size of the liquidity facility is generally structured to provide the investors with 100 percent liquidity coverage. There are two types of liquidity facilities, a seller-specific liquidity facility (also known as a parallel purchase agreement) and a general liquidity facility (also known as a program-wide liquidity or liquidity asset purchase agreement). For either arrangement, these types of external liquidity support may exist in the form of a liquidity loan agreement, where the liquidity provider agrees to lend money to the conduit on a predetermined basis, or a liquidity asset purchase agreement, where the liquidity provider agrees to purchase assets on a predetermined basis. Liquidity facilities are usually for 364 days but are renewable at the option of the provider.

### Seller-Specific

A seller-specific liquidity facility is a third-party's commitment to lend to a particular seller or sellers. In practice, a seller-specific liquidity facility is used to provide funding when the conduit does not want to fund a specific seller. This type of facility is typically structured so that the liquidity provider will not fund on defaulted or ineligible assets, bankrupt conduit, or investments greater than the commitment. The liquidity facility-providing bank must have the same minimum desired rating as the minimum desired rating on the commercial paper since the liquidity provider is obligated to provide funds to meet maturing commercial paper. In addition, once assets are transferred to the seller-specific liquidity facility, they cannot be transferred back to the conduit.

### General (Program-Wide)

In theory, the program-wide liquidity facility provides liquidity in the event of a commercial paper market disruption or any other circumstances in which the conduit has discontinued funding. A program-wide liquidity facility provides funding for 100 percent of the outstanding commercial paper and is typically for a 364-day term. The program-wide liquidity facility is structured so it will not fund on defaulted assets, bankrupt conduit, or investment greater than the commitment. Liquidity facility-providing banks must have A1/P-1 ratings to get an A1/P-1 rating on the commercial paper facility.

---

<sup>34</sup> A1 and P-1 (Prime-1) ratings represent Standard & Poor's and Moody's highest short-term debt ratings, respectively.

## STRUCTURAL TERMINATION TRIGGERS

Structural termination triggers, also referred to as stop-issuance and wind-down triggers, are aimed at protecting the investors from a deteriorating pool of credit card receivables and their corresponding losses. These triggers can be set at either the transaction-specific or program-wide level. Commercial paper backed by credit card receivables may include one or more of the following structural termination triggers:

- Change of control.
- The seller's failure to maintain an investment grade rating.
- Downgrade in the support provider's rating.
- The use of the credit enhancement facility beyond a specified level.
- Deteriorating administration of the securitization trust.
- Insolvency or bankruptcy of the seller/servicer.
- Portfolio deterioration below certain predetermined thresholds.
- Default or breach of any covenants, representations, or warranties.
- Net worth of the conduit falls below a predetermined threshold.
- Failure of the conduit to repay its obligations (maturing paper or liquidity advances).

## ABCP PROGRAMS AND FIN 46-R

In January 2003, the FASB issued FASB Interpretation No. 46, "*Consolidation of Variable Interest Entities*" (FIN 46). FIN 46 requires the consolidation of **variable interest entities** (VIEs) onto the balance sheets of companies deemed to be the primary beneficiaries of those entities. FIN 46 was revised in December 2003 (that is, FIN 46-R). FIN 46-R requires the consolidation of many ABCP programs onto banks' balance sheets. In contrast, under pre-FIN 46 accounting standards, the sponsors of ABCP programs normally were not required to consolidate the assets of these programs. Banks that are required to consolidate ABCP program assets must include all of the program assets (mostly receivables and securities) and liabilities (mainly commercial paper) on their balance sheets for Call Report purposes. If the Federal banking agencies had not amended the regulatory capital standards (as discussed next), the resulting increase in the asset base would lower the tier 1 leverage and risk-based capital ratios of banks that must consolidate the assets held in ABCP programs.

## Regulatory Capital Requirements for ABCP Programs

The Federal banking agencies amended the risk-based capital rules to permit sponsoring banks to exclude from their risk-weighted asset base those assets in ABCP programs that are consolidated on the banks' balance sheets as a result of FIN 46-R. Sponsoring banks generally face limited risk exposure to ABCP programs. This risk usually is confined to the credit enhancements and liquidity facility arrangements that sponsoring banks provide. In addition, operational controls and structural provisions, along with over collateralization or other credit enhancements provided by the companies that sell assets into ABCP programs, mitigate the risks to which sponsoring banks are exposed. However, this exclusion only pertains to risk-based capital ratios and does not affect the denominator of the tier 1 leverage ratio, which is based primarily on on-balance sheet assets as reported under GAAP. Thus, as a result of FIN 46-R, banks must include all assets of consolidated ABCP programs as part of on-balance sheet assets for purposes of calculating the tier 1 leverage ratio.

The leverage ratio is intended to work in conjunction with the risk-based capital standards by providing a simple, GAAP-based measure of capital adequacy. Under the amended rules, minority interests related to a sponsoring bank's ABCP program assets consolidated as a result of FIN 46-R are not to be included in tier 1 capital. Since the program's assets are not consolidated for risk-based capital purposes, the minority interest that supports those assets should not be included in the bank's consolidated regulatory capital. Thus, the reported tier 1

leverage capital ratio for a sponsoring bank would likely be lower than it would be if the ABCP program assets were consolidated and related minority interest were permitted to remain in the capital calculation.

A bank is only able to exclude FIN 46-R related assets from its risk-weighted asset base only with respect to programs that meet the regulatory capital rule's definition of an ABCP program. If the bank sponsoring a program issues ABCP that does not meet the rule's definition of an ABCP program, it must continue to include the program's assets in its risk-weighted asset base. The regulatory capital rule defines ABCP program to be a program that primarily issues (that is, more than 50 percent) externally-rated commercial paper backed by assets or other exposures held in a bankruptcy-remote, SPE.

## LIQUIDITY FACILITY PROVIDERS AND RISK-BASED CAPITAL

In addition to the exclusion of consolidated ABCP program assets from risk-weighted assets and related minority interest from tier 1 capital, the regulatory capital requirements with respect to liquidity facilities that support ABCP were also amended in 2004. As noted previously, liquidity facilities supporting ABCP often take the form of commitments to lend to, or purchase assets from, the ABCP programs in the event that funds are needed to repay maturing commercial paper. Typically, this need for liquidity is due to a timing mismatch between cash collections on the underlying assets in the program and scheduled repayments of the commercial paper issued by the program.

A bank that provides liquidity facilities to ABCP programs is exposed to credit risk regardless of the term of the liquidity facilities. For example, an ABCP program may require a liquidity facility to purchase assets from the program at the first sign of deterioration in the credit quality of an asset pool, thereby removing such assets from the program. In such an event, a draw on the liquidity facility exposes the bank to credit risk. Although the liquidity facilities expose banks to credit risk, the short-term nature of commitments with an original maturity of one year or less exposes banks to a lower degree of credit risk than longer-term commitments, provided the liquidity facility meets certain asset quality requirements discussed next. This difference in degree of credit risk should be reflected in the risk-based capital requirement for the exposure.

The amended risk-based capital rule imposes a 10 percent credit conversion factor on eligible short-term liquidity facilities supporting ABCP and a 50 percent credit conversion factor to eligible long-term ABCP liquidity facilities. These credit conversion factors apply regardless of whether the structure issuing the ABCP meets the definition of an "ABCP program." For example, a capital charge would apply to an eligible short-term liquidity facility that provides liquidity support to ABCP where the ABCP constitutes less than 50 percent of the securities issued causing the issuing structure not to meet rule's definition of an "ABCP program." However, if a bank (1) does not meet the rule's definition of an "ABCP program" and must include the program's assets in its risk-weighted asset base, or (2) otherwise chooses to include the program's assets in risk-weighted assets, then there will be no risk-based capital requirement assessed against any liquidity facilities that support that program's ABCP. In addition, ineligible liquidity facilities will be treated as recourse obligations or direct credit substitutes<sup>35</sup>.

The resulting credit equivalent amount is risk-weighted according to the underlying assets of the obligor, after considering any collateral or guarantees, or external credit ratings, if applicable. For example, if an eligible short-term liquidity facility providing liquidity support to ABCP covered an ABS externally-rated triple-A, then the notional amount of the liquidity facility would be converted at 10 percent to an on-balance sheet credit equivalent amount and assigned to the 20 percent risk-weight category appropriate for triple-A rated ABS.

---

<sup>35</sup> Risk-based capital rules for recourse obligations and direct credit substitutes are discussed in the Regulatory Capital chapter of this manual.

In order for a liquidity facility, either short- or long-term, that supports ABCP not to be considered a recourse obligation or a direct credit substitute, it must meet the rule's definition of an "eligible ABCP liquidity facility." The primary function of an eligible liquidity facility is to provide liquidity and, accordingly, such a facility should not be used to fund assets with the higher degree of credit risk typically associated with seriously delinquent assets. As a result, the liquidity facility, in order to be an eligible liquidity facility, must meet a reasonable asset quality test that, among other things, precluded funding assets that are 90 days or more past due or in default. The funding of assets past due 90 days or more using a liquidity facility exposes the bank to a greater degree of credit risk than the funding of assets that are less delinquent. In the case of a government guarantee, the past due limitation is not a relevant asset quality test. As a result, the risk-based capital rule does not apply the "days past due" limitation in the asset quality test with respect to assets that are either conditionally or unconditionally guaranteed by the United States government or its agencies, or another Organization for Economic Cooperation and Development (OECD) central government subsequent to a draw on a liquidity facility.

In August 2005, the Federal banking agencies issued guidance (FIL-74-2005) to clarify the requirement for the asset quality test to determine the eligibility or ineligibility of an ABCP liquidity facility and the resulting risk-based capital treatment for banks that provide liquidity facilities to ABCP conduits, entitled *Interagency Guidance on the Eligibility of Asset-Backed Commercial Paper Liquidity Facilities and the Resultant Risk-Based Capital Treatment*. As noted previously, eligibility is determined based on whether a liquidity facility contains contractual provisions that preclude the purchase of certain low credit quality assets. In order to clarify the requirements of the asset quality test, the interagency guidance states that an ABCP liquidity facility would be in compliance with the asset quality test if both of the following criteria are met:

- The liquidity provider has access to certain types of acceptable credit enhancements.
- The notional amount of such credit enhancements available to the liquidity facility provider exceeds the amount of underlying assets that are 90 days or more past due, defaulted, or below investment grade (in the case of a securities-backed program), that the liquidity provider may be obligated to fund under the facility.

In this circumstance, the liquidity facility may be considered eligible for risk-based capital standards because the provider of the credit enhancement generally bears the credit risk of the assets that are 90 days or more past due, in default, or below investment grade, rather than the bank providing the liquidity.

The following forms of credit enhancements are generally acceptable for purposes of satisfying the asset quality test:

- Funded credit enhancements that the bank may access to cover delinquent, defaulted, or below investment grade assets, such as over collateralization, cash reserves, subordinated securities, and funded spread accounts.
- Surety bonds and letters of credit issued by a third party with a nationally-recognized statistical rating organization rating of single A or higher that the bank may access to cover delinquent, defaulted, or below investment grade assets, provided that the surety bond or letter of credit is irrevocable and legally enforceable.
- One month's worth of excess spread that the bank may access to cover delinquent, defaulted, or below investment grade assets if the following two conditions are met: excess spread is contractually required to be trapped when it falls below 4.5 percent (measured on an annualized basis), and there is no material adverse change in the bank's ABCP underwriting standards. The amount of available excess spread may be calculated as the average of the current month's and the two previous months' excess spread.

Recourse directly to the seller, other than the funded credit enhancements enumerated above, regardless of the seller's external credit rating, is not an acceptable form of credit enhancement for purposes of satisfying the asset quality test. Seller recourse, for example, a seller's agreement to buy back nonperforming or defaulted loans or downgraded securities, may expose the liquidity provider to an increased level of credit risk. A decline in the performance of assets sold to an ABCP conduit may signal impending difficulties at the seller itself.

If the amount of acceptable credit enhancement associated with the pool of assets is less than the amount of assets that are 90 days or more past due, in default, or below investment grade that the liquidity facility provider may be obligated to fund against, the liquidity facility should be treated as recourse or a direct credit substitute. The full amount of assets supported by the liquidity facility would be subject to a 100 percent credit conversion factor. The examiners, however, can deem an otherwise eligible liquidity facility to be, in substance, a direct credit substitute if a bank uses the liquidity facility to provide credit support.

Bank management is responsible for demonstrating whether acceptable credit enhancements cover the 90 days or more past due, defaulted, or below investment grade assets that the bank may be obligated to fund against in each seller's asset pool. If management cannot adequately demonstrate satisfaction of the conditions in the interagency guidance, the examiners will then determine if a credit enhancement is unacceptable for purposes of the requirement for an asset quality test and, therefore, is an ineligible liquidity facility for risk-based capital purposes.

## VIII RESIDUAL INTERESTS VALUATION AND MODELING

---

### INTRODUCTION

Banks have realized and may continue to realize significant losses resulting from downward adjustments in the value of residual interests they hold in securitizations. As a result, considerable emphasis is placed on reviewing the residual interest valuations, including the assumptions and valuation model structure, during the examination process. In December 1999, the Federal banking agencies issued the *Interagency Guidance on Asset Securitizations Activities* to remind financial institutions of fundamental risk management practices governing asset securitizations, including valuation and modeling processes. This guidance states that residual interests that lack objectively verifiable support or that fail to meet the supervisory standards set forth in the guidance will be adversely classified by the examiners as loss and disallowed as assets of the institution for regulatory capital purposes. The contents of this guidance are discussed in greater detail in the Risk Management and Examination Issues chapter. In addition, definitions for the terms used in this chapter are included in the Glossary and are consistent with the definitions included in the regulatory capital rules and the language used in the Regulatory Capital chapter.

Residual interests refers to any on-balance sheet asset that represents an interest (including a beneficial interest) created by a transfer that qualifies as a sale (in accordance with GAAP) of financial assets, whether through a securitization or otherwise, and that exposes a bank to any credit risk directly or indirectly associated with the transferred asset that exceeds its pro-rata share of that bank's claim on the assets, whether through subordination provisions or other credit enhancement techniques.

Regardless of the terms used or structure of the securitization, any interests that continue to be held by the selling bank in a securitization where losses are not shared *pari-passu* should be considered residual interests for accounting, capital, and valuation purposes. For example, while the cash flows and losses associated with seller's interest are typically shared on a pro-rata basis, there are some situations where the transaction is structured so that even the seller's interest absorbs more than its pro-rata share of losses. Again, it is important to look at the substance of the interests that continue to be held by the selling bank and understand their characteristics, not just their names, to determine their exact risks.

This chapter discusses the accounting requirements, valuation models, modeling risks, model evaluation, and model validation techniques used to account for and value the residual interests. It also provides general examination guidance when reviewing banks' models and assumptions.

### ACCOUNTING REQUIREMENTS

FAS 140 requires a transferor (bank)<sup>36</sup> to recognize an immediate gain (or loss) on a transfer of the receivables that qualifies for sale accounting. As part of this process, the previous carrying amount of the transferred receivables is allocated between the assets sold and the interests the seller retains (including any residual interests) based on their relative fair values at the date of the transfer.

Any residual interests (other than interests that must be accounted for as derivatives in accordance with FAS 133) that can contractually be prepaid or otherwise settled in such a way that the seller would not recover substantially all of its recorded investment must be subsequently

---

<sup>36</sup> For the purposes of this chapter, the transferor is assumed to be the bank under examination and the term bank is used rather than transferor as stated in FAS 140. In addition, this chapter also assumes the bank is the servicer.

measured at fair value like either an available-for-sale debt security or a trading assets. Consequently, banks must ascertain the fair value of these residual interests on a periodic (at least quarterly) basis.

Determinations of fair value at the date of transfer and at subsequent measurement dates should be based on reasonable, conservative assumptions about such factors as yields, discount rates, projected credit losses, and payment rates. Examiners should expect the estimated value of residual interests to be supported by verifiable documentation in accordance with GAAP.

The concepts presented in FAS 140 for the measurement of fair value can be applied to both initial and subsequent valuations. FAS 140 does not introduce a new definition or concept of fair value; rather, it continues to define the fair value of an asset as (paragraph 68) “the amount at which that asset could be bought or sold in a current transaction between willing parties, that is, other than in a forced or liquidation sale. Quoted market prices in active markets are the best evidence of fair value and shall be used as the basis for the measurement, if available.” Paragraph 69 further states that “if quoted market prices are not available, the estimate of fair value should be based on the best information available in the circumstances.”

The estimates of fair value should consider prices for similar assets and the results of valuation techniques to the extent available in the circumstances, such as the present value of estimated future cash flows, option pricing models, and matrix pricing. Most banks cannot find reliable quoted market prices for the assets retained in the securitizations, and thus, commonly rely on the present value of estimated future cash flows valuation technique. FAS 140 recognizes this limitation and provides the following guidelines (paragraphs 69 and 70):

- Assumptions used for interest rates, default rates, payment rates, and volatility should incorporate what market participants would use in similar circumstances.
- Future cash flow estimates should be based on reasonable and supportable assumptions and projections. All available evidence should be used to determine the assumptions giving appropriate weight to the evidence that can be verified objectively.
- If a range of possible cash flow amounts and timing is used, the bank should consider the likelihood of these outcomes either directly, if applying an expected cash flow approach, or indirectly through a risk-adjusted discount rate, if determining the best estimate of future cash flows.

In response to question 77 of FASB Staff Implementation Guidance, *A Guide to Implementation of Statement 140 on Accounting for the Transfers and Servicing of Financial Assets and Extinguishment of Liabilities (Q&A)*, the FASB staff expresses a preference for an expected present value technique using a multi-scenario approach versus the traditional “best estimate” techniques. Expected present value techniques are discussed and illustrated in general terms in FASB Concepts Statement No. 7, *Using Cash Flow Information and Present Value in Accounting Measurements*. In a multi-scenario approach, a bank would forecast several different, but possible, expected cash flows and then apply a weight that represents the likelihood of each cash flow occurring. For example, if the bank forecasts a range of expected cash flows in the first month of \$100, \$200, and \$300, with probabilities of occurrence of 20 percent, 50 percent, and 30 percent, respectively, the expected cash flow for the first month in the discounted cash flow model using this technique would be \$210<sup>37</sup>. This simplistic example contains only three possible scenarios, but in reality, valuations should include more possible scenarios (question 77).

## Cash-Out Technique

When estimating the fair value of the residual interests, the bank’s assumptions should reflect the period of time that its use of the asset is restricted, any reinvestment income, and potential losses

<sup>37</sup> Deloitte & Touche, LLP, *Securitization Accounting: The Ins and Outs (And Some Do’s and Don’ts) of FAS 140, FIN 46R, IAS 39, and More...*, June 2005 edition.



due to uncertainties. The cash-out valuation technique is based on the time when the cash comes out of the trust (hence the term “cash-out”) and is returned to, or made available to, the transferor (bank). For example, if the bank holds a spread account as one of its residual interests, it would have to determine when it expects to receive those funds. If the securitization documents state that the spread account cannot be released to the bank until the investors’ certificates are fully paid, then the bank is not entitled to the cash until the expected final maturity date of the investor certificates. The bank must discount the cash flows from the date the spread account becomes available to the bank, which, in this scenario, would be the expected final maturity date of the investor certificates. Ultimately, when estimating the value of the credit-enhancing residual interests, banks’ valuation techniques must encompass both the entire period that its use of the asset is restricted and the potential loss due to uncertainties.

## Cash-In Technique

In contrast, the cash-in method assumes the discount period ends when the trust receives the cash, hence the term “cash-in,” meaning the time when the cash comes into the trust. However, the bank may not be entitled to the cash until a later date; therefore, the bank’s use of the cash is restricted. The trust may hold the cash as additional protection for the investors and release it to the bank only after the required terms and conditions of the securitization agreements have been met. Credit uncertainties associated with the transferred receivables arising subsequent to the cash coming into the trust, and while the trust holds the cash, are not always considered in the valuation technique under a cash-in methodology. Also, since the trust holds the cash until some future point in time, the bank’s use of the cash is restricted until the trust releases the cash to the bank. Using a cash-in method is inappropriate for credit enhancements such as cash reserve accounts and subordinated beneficial interests since it does not cover the period of time that the bank’s use of the cash is restricted and may not capture all credit uncertainties that a market participant would consider. Uncertainties may include the need to draw on the cash to cover trust expenses, such as credit losses allocated to investors’ certificates, funding a spread account, servicing costs, and investor coupons.

The “cash-out” valuation technique may be an acceptable method, but in no instance is the “cash-in” valuation technique acceptable.

## VALUATION MODELS

Development and implementation of valuation models and review of these models present inherent challenges. Valuation models are an abstraction from reality and can never be perfectly right. Plus, they are only good if users understand them completely. Often banks purchase or contract out the creation of a valuation model without fully understanding the model’s design. Models are typically complex as they must take into account all aspects of each securitization transaction, including the optionality embedded in most transactions, which can significantly affect the resultant values.

The most common type of valuation model is a **static cash flow model**. In a static cash flow model, the bank estimates future cash inflows and outflows based on a static environment (such as a fixed payment rate, etc.) and then it discounts the net cash flows using an appropriate discount rate. Static models have a basic fundamental flaw in that they ignore the fact that the point in time estimates may or may not happen. They assume or imply that the performance parameters put into the model are 100 percent accurate, which is not the case. While not perfect, static models may be the best some banks can do. Some banks may not have enough information to develop an accurate distribution of assumptions, and modeling using the probability of specific events occurring is typically not cost justified. Since banks cannot predict the expected cash flows with 100 percent certainty, the static model should at least incorporate stress scenarios. A static model with systematic, logical stress-testing may give management a better understanding of its exposure than a more complex model.

## Cash Flows

Valuation models typically have two parts. First, the cash flows thrown off by the underlying receivables must be modeled. Next, the allocation of those cash flows to the various claimants must be modeled. Allocations are dictated by the securitization documents and are referred to as the cash flow waterfall. Typically, cash flows are allocated to the certificate holders, credit enhancements, and residual interest holders.

The most difficult part of valuing the residual interests is predicting the behavior of the underlying receivables and, thus, the cash inflows they generate. For most revolving securitizations, each series represents an undivided interest in all the receivables of the trust (**socialized trusts**); thus, valuations should be done at the master trust level. Basic cash flow models use various estimates for receivable performance such as payment rate, yield, charge-off rates, and delinquency rates that are then discounted using an appropriate discount rate to produce a discounted present value estimate.

Cash flows into a securitization vehicle (trust) primarily come from interest, fees, and principal collections. Credit quality, competition, and market interest rates can cause significant variations in these sources. The amount of cash flowing into the trust is also dependent on the amount of outstanding principal receivables that generate the cash flow. When determining the value of a CE IO strip, the amount of outstanding principal is forecasted over the valuation or discount period, and the various cash flow sources identified above are calculated against the expected outstanding principal balance.

Banks commonly have one model that generates the valuation (typically the discounted cash flow model), referred to as the valuation model, and several other separate models that are used to predict the cash flow components, referred to as forecasting models. Forecasting models vary in complexity and can be based on simple historical data or vintage data, or can be more complex by incorporating the impact of different economic conditions on the performance of a specific pool of assets.

Cash flow allocations may be complex given the embedded optionality in most structures, but they are a straight-forward mechanical exercise and not typically assumption driven. Allocations must mirror the requirements in the pooling and servicing agreement. Examiners should review the cash flow distribution section of the pooling and servicing agreement (and the prospectus) and determine if the actual model used mirrors the allocations specified in the documents.

## MODELING RISKS

No active market exists for many residual interests, and, as a result, there generally is no marketplace from which an arm's length market price can be readily obtained to support the residual interest valuation. Many banks rely on quantitative models to determine the fair value of the residual interests. Attempting to determine the fair value of any asset using quantitative models presents certain risks that may lead to inappropriate values. Valuation models present two major sources of risk, either of which could produce asset values that are overstated:

- Inappropriate assumptions used to value the assets.
- Mechanical errors in the model construction.

The cash flow assumptions are impacted by the yield generated by the pool of assets and the level of credit and prepayment risk associated with the underlying receivables. As a result, the values of residual interests are extremely sensitive to changes in the underlying assumptions caused by the changing performance of the underlying receivables. In response to this elevated risk, the banking agencies revised their risk-based capital rules by requiring higher (ratings based approach or dollar-for-dollar) capital for residual interests. While the risk-based capital ratios are typically harmed (lowered) by overstated residual interest values due to the dollar-for-dollar

capital requirement, the leverage capital ratio is inflated by overstated residual asset values. In addition to the above noted risks, examiner should also be aware of the risk related to data input errors. Bank management should have sufficient controls ensure data inputs are accurate. Examiners should refer to the Regulatory Capital Chapter for further discussions on regulatory capital rules.

### Inappropriate Assumptions

Estimating the fair value for residual interests might be based on unjustifiable assumptions about expected future cash flows. Market events can affect the discount rate, payment speed, or performance of the underlying assets in a securitization transaction and can swiftly and dramatically alter the value of the residual interests. There is inherent uncertainty and volatility regarding the initial and ongoing valuation of CE IO strips and other residual interests. When a bank overvalues its residual interests it inappropriately generates "paper profits" (or masks actual losses) through incorrect cash flow modeling, flawed loss assumptions, inaccurate payment estimates, and inappropriate discount rates. This situation often leads to inflated earnings and capital levels, making the bank appear more financially sound than it really is. Assessing the reasonableness of model assumptions is probably the most significant and challenging aspect of the examination of securitization activities. This area is discussed in greater detail in the Evaluation of Model Assumptions section of this chapter.

### Model Construction

Errors in the model construction can lead to inaccurate valuations. Valuation construction errors can range from basic formula errors to more complex issues like the failure to adequately capture all possible cash flow distributions. As noted previously, the model must capture all cash inflows and all possible outflows (allocations), including any and all features that are specified in the securitization documents. If the model is not built to capture all of these features, the resultant values of the residual interests will be impacted, the degree of which depends on the error and the current situation.

## MODEL ASSESSMENT

The evaluation of the models and each of the assumptions requires considerable judgment and knowledge of valuation techniques, market factors that may affect the fair value, and actual and expected market conditions. As a result, examiners often consult with capital markets and accounting specialists for guidance.

### Evaluation of Model Construction

In order to review the valuation model construction, examiners should first obtain and review the bank's most recent internal or external model validation reports and corresponding workpapers or programs. They should assess the validation review's scope, process, and results. If any of these steps are incomplete or the results reveal flaws, the examiners should attempt to obtain the bank's actual model.

When reviewing a valuation model, examiners should be able to track the cash flows through the model to ensure that it accurately captures the cash flow priorities (waterfall) as stated in the securitization documents, including all nuances and features that can alter how cash is allocated. For instance, if the securitization documents state that a spread account will be funded if the excess spread falls below a certain threshold, management should be able to demonstrate to the examiners that the model does in fact capture this feature. If at the time of the examination, the excess spread is above the threshold and thus the spread account is currently not being funded, the model's ability to trap this cash may not be obvious. Management should be able to simulate the occurrence of a spread account trigger and demonstrate to the examiners how the model

captures this event. The examiners should be able to see in the actual model that cash flows are in fact diverted to the spread account as required. They can apply the same type of assessment techniques to other cash flow allocation specifications. Like valuation models, forecasting models used to forecast the various assumptions used in the valuation model also need to be assessed to determine if they are constructed properly.

Another method of verifying that the model captures all optionality embedded in the securitization is to run parallel analysis using a separate but comparable model. The challenge is to find a comparable model, or a shelf model that can be altered to be comparable to the requirements of the bank's securitization. The capital markets examination support section may be able to help an examiner run a parallel analysis. Also, external auditors often use a model developed by a specialist (third-party or internal) to value the residual interests in order to corroborate the reasonableness of the value calculated by the bank. If external auditors use such a technique, examiners should consider reviewing the auditor's workpapers and/or results of their review.

## Evaluation of Model Assumptions

Management must predict the monthly performance of the pool of receivables in the master trust over the expected life of the receivables. Depending on the volume of securitization activities, forecasting tools may vary from simplistic methodologies, such as a basic **roll-rate** model built using simple spread sheets to predict credit losses, to more sophisticated techniques, such as **econometric models** that assess the impact of the economy on the performance of a specific pool of assets. Bank management needs to determine the appropriate forecasting approaches. This decision should be based on the volume of securitization activities (and related financial statement impact), complexity or volatility of the underlying asset pool, the range of differing characteristics of the asset pool (prime, subprime, secured, unsecured, pricing), available historical data, data mining capabilities, the complexity of the securitization structures, available technical resources, and management expertise. This is not to say that it is acceptable to have less reliable forecasting if any of these aforementioned items are limited, but, instead, management should determine the best technique for the activity (considering both volume and complexity) the bank is engaged in, ensuring sufficient compensations are made for limited areas (such as the need to use proxies if historical data is limited), and decisions about investments in more advanced technology or expertise to adequately meet cash flow forecasting needs.

After forecasting the expected cash flows generated from the underlying receivables, management must then determine the appropriate discount rate applied to the forecasted cash flows. Determining the appropriate discount rate, which is discussed later in this section, is one of the most challenging and controversial aspects of the valuation process.

Forecasting is not isolated to determining the value of the residual interests, but is also used for other business purposes, such as budgeting and the allowance for loan and lease losses (ALLL). As a result, there should be some correlation between performance metrics assumptions used for the various business purposes. For example, the charge-off assumptions used for IO strip valuation purposes should have some relationship with the expected loss rate for ALLL adequacy purposes. Any significant variations should be explained and may reveal a potential flaw in either the valuation model assumptions or the assumptions used for other business purposes. Valuation models are only as good as the assumptions and data put into the models. The remainder of this section discusses the various residual interests and an assessment of the assumptions used to value these assets.

### *Credit-Enhancing IO Strips*

The valuation of the CE IO strip is based upon the present value of future cash flows in excess of amounts needed to service the certificates and cover credit losses and other fees of the trust. CE IO strips provide the first line of defense against credit losses on the receivables supporting the investor certificates, and, as a result, are typically the most subordinated residual interests in a

credit card securitization, presenting the greatest risk and volatility. Also, the value assigned to the CE IO strip is a significant driver of the resultant gain on sale for the initial and periodic transfer of the receivables; thus, impacting earnings performance, asset quality, and capital levels.

#### Cash Flow Assumptions

For a discounted present value technique, bank management must make certain assumptions about cash inflows and outflows generated by the receivables allocated to the investor certificates<sup>38</sup>. Typically, banks use historical analysis, baseline analysis, or a multiple-scenario analysis, or some combination of all three, to project performance. Using historical analysis for forecasting can be as simple as viewing historical data on a portfolio basis or more sophisticated by segmenting the portfolio by vintage, credit scores, or other criteria reflecting the predominate risk characteristics of the underlying receivables (asset type, size, interest rate, term, geographic location, etc.) and ensuring the data used in the forecasting captures the accounts' life cycles. Baseline analysis simply assumes what the bank is experiencing today is what it will experience in the future. Multiple-scenario analysis incorporates different possible management or economic scenarios into its forecasting. Every portfolio metric is impacted to some degree by the same forces, such as changing origination, account management, or collection strategies; account life cycles; economic conditions; seasonality; and competition. The challenge is to quantify the impacts on the various portfolio metrics. More sophisticated techniques involve segmenting the receivables into groups based on the predominate risk characteristics of the underlying receivables, incorporating macroeconomic factors, integrating seasonality, incorporating changing management strategies or scenarios, and modeling over the account lifecycles. Various statistical and quantitative techniques may be used to incorporate these variables.

#### *Yield assumptions:*

The yield represents finance charge collections and ancillary fees, such as annual fees, late fees, and over-limit fees, and is expressed as an annualized percentage of the outstanding principal balance of the pool of receivables in the master trust. The yield represents the expected cash inflow that is available to cover the expected expenses (cash outflow) of the securitization series within the master trust. When forecasting the yield, the assumptions should not include interchange fees or cash advance fees since these fees are not generated by the underlying receivables that have already been sold. They are generated by future transactions for interchange or by the future receivables created by cash advances.

The yield can be impacted by many different factors, and forecasting the yield should consider these influences. For example, the yield forecast should consider the presence of any teaser rates or different pricing structures in the asset pool. These should be quantitatively identified, monitored, and incorporated into forecasting models. Also, since the CE IO strip valuation is based on anticipated cash flowing into the master trust, the volume and trend of delinquent accounts impacts the cash yield. If delinquencies are on the rise and this trend is expected to continue based on internal and external factors, management should forecast a corresponding decline in its yield forecasts, all else held equal. The yield forecast may also encompass expectations regarding the interest rate environment, especially for variable-rate receivables.

Management should also track and assess the impact of convenience users on yield forecasts. If recent marketing solicitations are likely to attract and result in a higher proportion of convenience users, these will likely result an overall compression of the yield since convenience users do not incur finance charges. The bank should also incorporate a reasonable assumption or adjustment

---

<sup>38</sup> Cash flows should be calculated on the amount of credit card receivables supporting the investor certificates, and the valuation model should not include credit card receivables designated as seller's interest in the outstanding principal amount of receivables. For example, if the master trust has \$12 billion in credit card receivables of which \$2 billion represents seller's interest, the various cash flows (yield, charge-offs, etc.) will be calculated using the \$10 billion that represents the investor certificate's collateral.

to the projected yield for cardholder payments that are returned for insufficient funds. Payments that are ultimately returned for insufficient funds compress the cash yield since no cash is ultimately collected.

The forecasted yield should also reflect fee-waiving practices. Management has flexibility with regards to certain fees, such as late or over-limit fees, and, in an effort to retain customers, management may waive these fees for certain types of account holders. Examiners should review the bank's fee policies and its actual practices. If the bank's policy has recently changed to either lower, increase, or alter fee assessment amounts or criteria, these changes should be reflected in the yield forecast. If the bank relies solely on historical information to project expected yields and does not make adjustments for changes in policies or practices, the assumptions may not be reasonable. In addition, if historical data includes cash advance fees, management should make an adjustment to the forecast to ensure these types of fees are not included in the forecast.

This manual provides only a few examples of factors that can influence the yield, and examiners should be aware of other factors occurring at the institution that may impact forecasting. Management's yield forecast and related documentation should be sufficiently robust to capture those nuances and strategies that impact the estimation and should be sufficiently transparent to allow for senior managers, the board, and the examiners to fully understand and assess the reasonableness of the various components of the yield and all cash flow assumptions.

*Charge-off rate:*

The charge-off rate measures the amount of credit card balances charged-off, or expected to be charged off, expressed as an annual percentage of the outstanding principal balance of the underlying receivables in the master trust. The charge-off rate has two components: the contractual loss rate and the non-contractual loss rate. Contractual losses are those losses that are recognized in accordance with the bank's charge-off policies based on customers' payment performance. Non-contractual losses arise primarily due to bankruptcies and to a lesser extent deceased cardholders.

Modeling credit risk in the underlying receivables is very challenging, particularly for banks experiencing financial difficulties. Using historical analysis to predict future credit losses presents both opportunities and traps. It can be easily supported and documented, but the past is not always a reliable predictor of future events. Historical analysis can also be skewed in a bank experiencing rapid growth as performance ratios are compressed and perhaps masking credit deterioration. In addition, the length of historical data can distort results. If a bank is experiencing deteriorating credit quality, it may opt to use a longer period of historical losses, which would result in a loss assumption that is probably too low. Conversely, if the bank is experiencing improving credit quality, it may opt to shorten the historical period. While this situation may be acceptable, banks must support their data manipulation decisions.

Banks use various historical analysis methods to monitor credit risk. The Risk Management Examination Manual for Credit Card Activities provides more discussion on the various credit monitoring tools that banks use when determining credit losses. These tools could also be used in the bank's cash flow valuation models. One tool is vintage analysis, which allows the bank to compare issues at a similar age. Roll-rate analysis, which depicts the percentages of accounts or receivables rolling between delinquency buckets and onto default, is used to compliment vintage analysis.

Roll-rate analysis is a simplistic method for forecasting charge-offs and is relatively reliable for the first six months of projected contractual losses; however, it becomes less reliable in later timeframes. With a roll-rate model, predictions are made by computing a moving average of historical roll rates. As noted, the length of historical data can skew the results. The roll-rate technique certainly has its limitations, particularly since it does not distinguish partial payments or payments that prevent an account or receivable from rolling forward, etc. Changes in the bank's

re-aging policies also impact charge-off forecasting. If the bank either liberalizes or tightens its re-aging practices, management should adjust the data used to predict future losses accordingly.

If bankruptcies represent a significant percentage of charge-offs, predicting future charge-off rates using a simplistic roll-rate analysis may not be sufficient. While predictive models and techniques are improving, the timing and amount of bankruptcies are difficult to forecast and this increased uncertainty should be captured in the valuation process by either increasing the discount rate applied to the cash flows or applying a more conservative charge-off rate assumption. Management must also consider the potential impact changing laws, regulations, and accounting rules may have on charge-offs and all forecasts, such as the October 2005 changes in the bankruptcy rules. Again, if using historical data, management should make some quantitative adjustment to its forecast to capture the impact of changing laws on its estimation of future charge-offs.

Many institutions are enhancing their loss forecasting by moving toward historical statistical analysis to determine the loss rate and its associated volatility. One example of a more statistical-based approach to using historical information would be a gross principal charge-off rate that is calculated based on the actual principal loss rate for a given time period using a moving average plus one standard deviation. However, management should ensure the results are not smoothing out increases in losses and that the time period includes periods of economic stress.

Larger credit card issuers and securitizers are increasingly employing more sophisticated loss prediction techniques in an effort to identify potential losses prior to an account becoming delinquent. While many of these techniques are used for portfolio management and strategic decisions, they may also be used to improve the forecasting of credit losses for CE IO strip valuation purposes. For example, management typically monitors new account activity to see if recent marketing campaigns are meeting expectations. If management observes that for a particular campaign a significant volume of cardholders run up high balances in the first month, leave little open-to-buy, and then make only the minimum payment, it is more likely that these accounts will become delinquent compared to other newly-acquired accounts having much different activities. Management could use this type of information to improve its loss forecasting.

Examiners reviewing charge-off assumptions should work closely with the examiners assessing asset quality and the related origination and credit administration practices for the on-book portfolio. If practices or portfolios that present elevated credit risk and the potential for higher losses in the future are identified, these issues should be incorporated into the assessment of the reasonableness of the charge-off assumptions used for valuing the CE IO strip.

#### *Base Rate:*

The base rate represents the sum of the coupon rate paid on all the investor certificates, expressed as an annualized percentage of the outstanding balance of the series at the beginning of the month, and the servicing fee percentage. Unlike the yield and charge-off rate noted previously, the base rate is calculated for each series in the master trust rather than on the entire pool of receivables supporting all the series. The coupon on the investor certificates varies from series to series depending on market and pool specific performance influences.

As noted, the base rate contains two components, the coupon rate paid on the investor certificates and the servicing fees. For the coupon rates, the index and spread are known variables (assuming a variable-rate structure), so the bank must forecast or estimate changes in the index based on assumptions about market conditions. However, many banks simply assume a constant interest rate environment for both the yield and coupon rate assumptions and then, using simulation techniques, assess the impact varying interest rate environments have on these components and the residual interest values, similar to interest rate risk measurement methodologies performed for on-balance sheet assets and liabilities. This type of simplistic analysis should be reviewed thoroughly and it would be reasonable to expect some other type of

adjustment, such as a higher discount rate, to compensate for the elevated cash flow uncertainties. The servicing fee component is merely the stated servicing rate specified in the pooling and servicing agreement.

*Principal Payment Rate:*

The principal payment rate is calculated as the amount of principal payments received each month expressed as a percentage of the outstanding principal balance at the end of the preceding month. The principal payment rate is very important to investors monitoring their investments or for making investment decisions since it measures the rate at which cardholders pay back their debts, and ultimately, the rate that investors will get paid in the event of an early amortization. For valuation purposes, estimating the principal payment rate indirectly impacts the CE IO strip valuation. If principal payment rate assumptions are too low, the length of time and amount of principal outstanding (weighted average life) will be higher thus inflating the CE IO strip value.

A pool's principal payment rate can be influenced by the bank's minimum payment policy. Recent changes in minimum payments, particularly for those banks with a significant number of customers that make only the minimum payment, may have a measurable impact on the principal payment rate. The impact of changing minimum payment policies should be captured in management's assumptions.

In addition, marketing strategies designed to attract either higher-risk or lower-risk accounts will ultimately impact principal payment rates. For example, if a recent campaign is expected to attract a larger volume of convenience users, the principal payment rate will likely increase accordingly. This type of information should be considered when forecasting principal payment rates on the pool of receivables for the CE IO strip valuation methodology.

To the extent possible, valuation models should consider attrition (cardholders who pay off their balances and close their accounts) of the underlying receivables. Modeling attrition can be challenging but data to perfect this technique is becoming increasingly available, and banks should attempt to model attrition rather than simply using a fixed principal payment rate. Much of attrition is a function of credit score, competition, and the mortgage market. As customers' credit scores improve, they may switch to a lower-cost or more attractive card, probably with another institution unless the bank has effective retention practices. Competitors offering more attractive pricing, products, and rewards also impact customer retention. Lastly, heightened cash-out refinancings or home equity lending usually correspond to increased attrition as cardholders commonly use the cash to pay-off higher-cost credit card debt or consolidate this debt into the home equity line of credit. Any other similar trends in lending should be considered and evaluated by the bank.

Some examinations have revealed a controversy over how the basic cash flow model is set up. When using the present value of expected cash flow technique, the model derives the cash flows from the assumed outstanding principal balance. The controversy arises over which principal balance should be used when calculating the cash flows, the original principal balance or the declining or current principal balance. The principal payment rate can be interpreted in two ways:

- Method 1: \$ amount of the monthly payment = original balance x payment rate
- Method 2: \$ amount of the monthly payment = current balance x payment rate

Each of these methods reveals two very different results:

- Method 1: Original principal balance: \$100, payment method: 10%
  - Period 1:  $\$100 - (100 \times 10\%) = \$90$  balance
  - Period 2:  $90 - (100 \times 10\%) = 80$  balance



- Period 9<sup>39</sup>:  $20 - (100 \times 10\%) = 10$  balance
- Method 2: Current principal balance: \$100, payment method: 10%
  - Period 1:  $\$100 - (100 \times 10\%) = \$90$  balance
  - Period 2:  $90 - (90 \times 10\%) = 81$  balance
  - Period 9:  $43 - (43 \times 10\%) = 39$  balance

As illustrated, Method 2 results in a significantly longer weighted average life (WAL) of the underlying receivables, about twice as long as Method 1. Under method 2, the outstanding principal balance is about four times larger than Method 1, which results in the value of the corresponding CE IO strip being significantly larger as well. Both methods are allowed under GAAP. However, Method 1 is typically the method preferred by auditors and regulators since it results in a more conservative valuation. Examiners should review the model and determine which method the bank is using. If the bank is using a process similar to Method 2, examiners should contact their capital markets specialist and/or regional accountant and perhaps the bank's external auditors to determine the appropriate course of action. It is likely that the bank will be required to adopt a process similar to Method 1 and incur a loss for any book amount that is in excess of the fair value of the asset(s). Depending on the circumstances, the bank may also be required to amend prior call reports.

*Discount Rate:*

The discount rate applied to the expected monthly excess cash flows to derive their present value should reflect the internal rate of return that a market participant would require given the opportunity cost of waiting for the money (time value of money) and the degree of risk inherent in the asset's expected cash-flow stream. The discount rate is probably one of the most difficult assumptions to quantify and justify. There is no hard and fast process to determine the discount rate. Accounting literature requires that the discount rate be based on what others active in the market would require for an investment with similar risk characteristics. Since issuers' pools perform differently and each assumption used for the various cash flow components have different degrees of conservatism, it is challenging to identify a rate that represents a true, comparable market rate.

The discount rate chosen should be directly related to the reasonableness or conservativeness of the assumptions used for determining the cash flow stream. Theoretically, if the bank has carved out all possible risk of loss, the bank could use a risk-free rate. However, it is impossible to forecast with 100 percent accuracy given all the nuances noted previously and, therefore, virtually impossible to justify the risk-free rate. The discount rate should compensate for uncertainties in both model construction (potential mechanical or human error) and model assumptions. The degree of this compensation depends on the comfort level with the other assumptions and the quality of the model construction. If the bank does not perform adequate stress-testing, back-testing, or validation techniques, then this uncertainty premium should expectedly be higher. If the cash flow assumptions are very robust and the primary risks associated with the cash flows are dealt with by more sophisticated forecasting techniques, such as a multi-scenario approach, segmenting the portfolio into sufficient gradations of risk and related performance assumptions, considering macroeconomic influences in the forecasts, and other techniques previously noted, then the corresponding discount rate may justifiably be lower. However, if the cash flow assumptions are not very robust and represent simplistic projections that don't consider all influences, the discount rate should be higher to reflect the elevated uncertainty in the cash flow assumptions.

Banks use a variety of methods to arrive at a discount rate. Some look to corporate spreads for rated investments with similar characteristics and use these as a basis for deriving the discount rate. The problem with this method is that limited markets exist for deeply subordinated, low-rated (or non-rated) assets, requiring management to make assumptions about investor

---

<sup>39</sup> The interim periods (3-8) were calculated as shown in periods 1 & 2 but are not reflected in an effort to condense the example.

requirements for assets with a limited market. Regardless of the technique used to derive the discount rate, the ending rate must make sense given the risk present in the assets and be supported by reasonable and justifiable documentation.

#### *Day Count:*

Since all the components of determining the excess spread and corresponding CE IO strip value are on a cash basis, the number of days in any given month will impact the cash flowing into the master trust. Months with fewer collection days, such as February, will typically have a lower yield, all else held equal. Whether or not there is a corresponding reduction in charge-off rate depends on the bank's charge-off policies. Months with fewer collection days commonly reflect lower projected excess spreads.

Banks will also calculate and report rates for performance variables using different methods. Most banks annualize yields and charge-off rates using a "30 days per month and 360 days a year" process. Others calculate these measures using the actual number of days in the due period (month) by the actual number of days in the year.

#### Excess Spread

Excess spread is the resultant cash flow generated by the estimated assumptions. Excess spread is viewed as the measure of profitability of the securitized credit card portfolio. It is simply the yield minus the charge-off rate minus the base rate (and any other trust expenses that may exist, such as surety bond fee). Each month the bank must report its realized excess spread on the securitized receivables. If the bank is an SEC registrant, it reports trust information in monthly 8(K)s filed with the SEC. The number the bank reports represents the actual cash collected and the actual expenses paid. This amount includes interchange fee and cash advance fee income, which is not included in management's forecast of expected cash flows for determining the value of the CE IO strip. Therefore, when comparing the bank's actual excess spread to what it projected for that particular period, the interchange fee and cash advance fee must be subtracted from the excess spread realized, assuming the bank appropriately excluded these fees from the CE IO strip calculation. This should also be kept in mind when assessing the expected performance of a securitization. For example, if a CE IO strip valuation forecast shows a low or zero excess spread for some future month, examiners need to remember that interchange and cash advance fee income, which is not included in the forecast, will be included in the actual excess spread earned. Thus, examiners would want to understand the average interchange and cash advance fee income earned each month to have a more accurate assessment of the potential for triggering an early amortization event in future months.

The excess spread is not only impacted by incremental changes in yield, charge-offs, and base rate, but by the degree and timing of changes in each component. For example, if a bank is attempting to improve the quality of the underlying portfolio by originating and selling better quality receivables into the trust, there would be an expected corresponding decline in the yield probably immediately; however, the anticipated decline in charge-offs associated with higher-quality accounts may not be realized until sometime in the future (assuming no significant increase in volume). As another example, a rising charge-off rate may signal deteriorating credit quality, but the impact to the excess spread may not be significantly impacted if there is a corresponding increase in yields. These nuances should be considered in forecasting excess cash flows when deriving the CE IO strip value.

The CE IO strip valuation can also be impacted by the need to fund a spread account. If the bank's projections for the excess spread for some future month show it falling below a spread account trigger (keeping in mind the need to consider interchange and cash advance fee income), the model should reflect the fact that the bank will not be receiving those assumed cash flows in the months following a trigger event. Instead, those excess cash flows will be used to fund a spread account and will not be available to the bank until some time in the future, if at all. The challenge with modeling this scenario is that the bank may still be entitled to the cash

diverted to the spread account (assuming it is not ultimately used to pay obligations to investor certificate holders) but at some time later than it would have received the cash had the spread account funding requirement not been triggered. This future time period may be longer than the valuation period of the CE IO strip. Management needs to determine how to capture this nuance. Regardless, the CE IO strip valuation must reflect the expectation that these excess cash flows will not be received as scheduled if a spread account trigger is met.

The model also needs to consider the point in time when the spread account becomes fully funded because subsequent excess cash flows will again come back to the bank. However, this second event may occur at a time that is longer than the valuation period of the CE IO strip. For example, if the spread account trigger occurs at month eight and it is estimated to take five months to fill the spread account, but the CE IO strip is valued over its WAL of ten months, this second event would not necessarily be captured in the valuation since it will occur at month 13. However, if a bank is currently filling a spread account, and the spread account is expected to be filled in two months, then the discounted cash flow valuation should show the excess spread returning back to the bank following month two after the spread account is fully funded. The bank will separately value the spread account, which is discussed later.

### *Retained Subordinated Bonds*

Retained subordinated bonds should be valued based on their respective risk characteristics. If the bank retains a junior-rated bond that has a reasonably active market, management may have elected to determine its market value using recent market prices paid on bonds with similar characteristics. For example, if the bank retained a triple-B rated bond with a stated coupon priced off the one-month LIBOR, management could establish a market price based on recent trades of comparably-rated and -priced bonds. The challenge arises when the bank holds bonds that are either poorly rated or non-rated for which no or limited active markets exist. Banks typically resort to the discounted cash flow methodology to value these bonds. In this case, there are two key components to the valuation:

- The point (or points if an amortizing bond) in time that management expects the bond to be repaid from the cash flows generated by the underlying receivables (discounting period).
- The discount rate used to convert the future value of the bond to a present value.

Typically, the bonds are either interest-only or zero coupon bonds with no principal paid until maturity. As such, the discounting period would be the ultimate expected maturity of the bond. If the bond is an interest-paying bond, the cash flow stream should incorporate the periodic interest payments. If the bond is a zero-coupon bond, the only cash flow would be the ultimate principal payment received at maturity. The discount period and rate should be based on facts that are known to the market.

Again, the challenge is to determine the appropriate discount rate to apply to the valuation. Similar to the discussion in the CE IO strip section, many different methods can be used that derive varying results. In the end, the discount rate used must be reasonable for the situation (payment priority or subordination level in relation to other assets retained) and be fully supported with adequate documentation. A common rule of thumb is that the discount rate on a more subordinated bond should be higher than the coupon paid on a higher-rated bond. For example, assume that as part of the securitization, a triple-B rated bond is created and carries a coupon rate of one-month LIBOR plus 100bp (simply for illustrative purposes), which is assumed to be a market yield if this bond sells at par. In order to receive the triple-B rating in this example, assume the rating agencies required a 25 percent subordination (again, simply for illustrative purpose), which creates the size of an un-rated bond that is held by the bank. Given these facts, the discount rate used to value the un-rated bond held by the bank should be proportionately higher than the coupon paid on the more senior, triple-B rated piece. The discount rate applied to the un-rated bond would be LIBOR plus some spread that compensates an investor for the fact

that payments intended for the un-rated bond may be used to support the more senior bonds plus the fact that the un-rated bond has no credit enhancement (in this simplistic example). Therefore, in this example, it would appear inappropriate if the bank used a discount rate on the un-rated bond that was near or below the LIBOR plus 100bp coupon paid on the more senior bond.

The above is just one example of a reasonableness test examiners can use to assess the discount rate used to arrive at the value. There are other methods that apply similar common-sense approaches. In addition, there have been cases where bank management is applying a discount rate that is lower because it knows or believes something that the market does not. For example, banks have attempted to support a lower discount rate based on management's belief that it has stronger underwriting or collection practices than the market is aware of or based on the position that "it is worth more to us than it is to an investor." These are not valid arguments. The value of the asset must be based on what a market participant would pay after assessing all publicly-available information.

Examiners will need to review the deal documents to determine the exact cash flow allocations. In some cases, there is a spread account that supports only certain bond classes, not all classes.

### *Spread Accounts*

Spread accounts are very difficult to value since there is no active market from which to derive a market value. These assets are typically valued using the discounted cash flow technique noted previously. The key to assessing the valuation of the spread accounts is to determine if and how much of the cash will be needed to support investor certificates and when the cash, if not used to support investor certificates, will become available for the bank to use. The amount is then discounted using an appropriate market discount rate to its present value. The discount rate needs take into consideration the risk that all or a portion of the spread account may be used to support the investor certificates. Again, theoretically, the credit losses are absorbed or considered when valuing the CE IO strip. Therefore, if credit risk is captured with 100 percent certainty in the CE IO strip valuation, the discount rate would simply compensate an investor for the time the money is unavailable. But, again, assumptions and models are never 100 percent accurate and uncertainty must be considered in deriving the discount rate. Plus, the fact that a spread account trigger was met and a spread account is being or has been funded typically increases concerns about credit risk and the possibility that some or all of the funds may be used to support the investors. Also, if the spread account is available to support all bonds, even the un-rated, most subordinated bond, the discount rate should be commensurately higher than the rates used to value those more senior assets. For example, if the non-rated, zero-coupon bond described in the prior example was supported by the spread account and the discount rate used to present value this bond was the one-month LIBOR plus 500bp, then examiners should expect to see the discount rate on the more subordinated spread account to be commensurately higher than LIBOR plus 500bp.

Spread Accounts (as well as cash collateral accounts and reserve accounts) are typically invested in high-quality, highly-liquid investments, the type and term of which are specified in the pooling and servicing agreement. Examiners should review the investments and determine if they are in accordance with the governing securitization documents. Furthermore, the interest earned on these assets may impact the valuation of the spread account or other retained interests. The interest may be paid directly to the transferor and therefore included in the valuation of the spread account (included in the monthly cash flow assumption), used to further fund the spread account if it is not fully funded, or considered as part of the fees and finance charges and captured within the IO strip valuation. The securitization agreements should dictate how earnings generated by the spread account are treated and the valuation should be consistent with the required treatment.

### *Accrued Interest Receivable*

Accrued Interest Receivables (AIR) represent the bank's right to interest earned but not collected on the investors' portion of the transferred credit card receivables. When the bank retains a right to the excess cash flows generated by the transferred receivables, the rights are generally subordinated to the investors. The seller's right to the excess cash flows related to the AIR serves as a credit enhancement to the third-party investors, similar to other credit enhancement facilities. If and when the cash is ultimately collected on the AIR, the cash must first flow through the trust, where it is available to satisfy more senior obligations before the excess cash flow can be remitted to the bank. Since investors are paid from these cash collections before the selling bank receives the amount of the AIR that is due, the seller may or may not realize the full amount of its AIR asset. As a result of this feature, AIR created on the investors' portion of the transferred receivables is considered a residual interest for risk-based capital purposes and the bank must determine the fair market value of the AIR. At times, examiners have identified this type of AIR commingled with the AIR recorded for non-transferred receivables, including being a component of the seller's interest amount. Examiners need to make sure that the AIR generated by the investors' portion of the transferred receivables is identified as an other asset and appropriate risk-based capital calculations are applied.

Valuation methods must focus on the timing and likelihood of collecting of the AIR asset. The timing of collection can be difficult to determine. For example, assume a cardholder has not made a payment in 60 days and then makes a payment equal to one month's payment due. Rather than the bank simply reducing the AIR asset by that one month's payment, the cash must first run through the trust. If there continues to be cardholders allocated to the investors' certificates that don't make payments, this cash payment may instead be used to satisfy the investor coupon versus the bank's AIR asset. While this is a simple single case scenario, the bank is faced with the challenge of estimating the timing and amount of future cash flows that will ultimately be collected to satisfy the AIR assets. Banks use a variety of methods, from a simple estimation of uncollectible AIR deducted from the AIR asset (or a valuation allowance) to a suppression methodology where each month, instead of booking the full amount of accrued but unpaid interest it is entitled to receive, the bank only books the amount of accrued and unpaid interest it expects to receive. With this methodology, there are no subsequent reversals of previously accrued fees and typically no valuation allowance against the AIR asset; however, banks should be keeping track of how much interest income is suppressed each month and in any fiscal year (year-to-date). Regardless of the process, the assumptions used to derive the value must be supported by a logical and documented process.

Accounting and regulatory capital implications for the AIR asset are discussed in the Accounting and Regulatory Capital chapters, respectively, of this manual.

### *Other Residual Interests*

This chapter discusses the primary residual interests that are provided by either the cash flow generated by the transferred receivables or the securitization structure. Other external credit enhancements may also require fair valuation techniques. For example, if the bank is providing a cash collateral account, it needs to determine the fair value of that asset. If the bank has a loan with a third party to provide the cash collateral, the bank would still need to determine the fair value of the cash collateral. Regardless of the fact that the bank has the actual cash in its possession, the cash is for the benefit of the trust and the investors. The risk that the bank may not be able to keep the full value of the cash or have sufficient amount in the cash collateral account to repay the loan impacts its value. If a third-party market participant wanted to purchase the right to this cash, it would consider these risks in the price it is willing to pay for the right to the asset.

## STRESS TESTING

Examiners should obtain and review the bank's most recent stress tests. The bank should be testing models to determine how sensitive the outcome is to various changes in assumptions. Model stress testing should be conducted against historical scenarios, against potential environmental scenarios to test for issues with the bank's risk profile, and against extreme non-sensical environments. Examiners should review the bank's documentation on the stress tests to determine if it fully explains and supports the scenarios used and resultant outcomes.

Examiners should expect banks to run different scenarios for the various assumptions to see the impact on the resultant value of the residual interests. Management should not be simply stressing each assumption in isolation but should incorporate the interaction between the different assumptions. For example, if delinquencies are projected to increase, this should result in declining yields and eventually higher losses (typically six months later if using a 180 day charge-off policy).

In addition, assumptions should be validated against industry standards, often referred to as benchmarking, but these standards should only be used as generic guidance. Data derived from the specific pool of assets is generally more reliable; however, any large divergences from industry standards should be justified. The sensitivity of the residual interest to different assumptions depends on the model structure, which itself is full of behavioral assumptions (how will cash flow be affected by different events).

## VALIDATION

The validation process consists of a wide range of activities intended to assure that the resultant residual interest values produced by the valuation process are logical, sound, and accurate. Timely, accurate, and reliable data are the foundation for an effective and supportable valuation process. Examiners should review the most recent validation reports and workprograms.

Periodic validations should be performed to reduce vulnerability to model risk. Validation of the model includes testing the internal logic, ensuring empirical support for the model assumptions, and back-testing the models with actual cash flows generated by the pool of assets in the master trust. The validation process should be fully documented to support conclusions. Examiners should review the validation process to determine if it is independent from line management as well as the modeling process.

Examiners should also expect the board to have approved an effective validation policy and review the policy for adequacy. The validation policy should set forth the required validation processes and procedures, scope, frequency, reporting, documentation requirements, and responsibilities. It should also include tolerance limits for differences between projections and actual outcomes plus any remedial actions required if the discrepancies fall outside of the policy limits.

Validation of the valuation process should focus on each element of the valuation, such as cash flow assumptions, discount rate, and model construction. Management should be completing a full, comprehensive validation process at least annually, which should be fully documented and reported to the board of directors or the audit committee.

The goal of the validation process is to evaluate the logic involved with the development of the valuation process. Developing the valuation process requires management to adopt forecasting methodologies, make adjustments to fine-tune the forecasts, and monitor the outcome of its forecasting and valuation models. These decisions all require management judgment. The validation process ensures that these judgments are based on plausible and informed analysis. Validation is also used to confirm that the process continues as intended. While there are several

aspects of the validation process, such as benchmarking if limited historical data is available, one of the most important aspects of validation is back testing.

## Back Testing

The validation process should include the comparison of estimated parameters or performance metrics with the actual outcomes. Banks should be conducting this type of back testing (or variance analysis) to determine the predictive ability of its model and the reliability of its assumptions, often referred to as in-sample testing. For this process, the bank uses the assumptions it used when it initially valued the residual interests and compares the results to its current fair value. Out-of-sample testing is more robust since it tests the predictive power of the model against a data set other than that used to set the parameters.

Most banks have internal reports that project the various cash in and outflow positions (finance charges, fees, charge-offs, principal payment rate, and base rate) for a specified period. For active securitizers, management updates this monthly, but at a minimum, all banks recording IO strips must do this quarterly for call reporting purposes. Examiners should obtain the projection that was done six months (or longer) prior to the examination and then compare the actual excess spread earned (remembering to remove interchange and cash advance fees) in the preceding six months to what had been assumed by the bank six months prior. Ideally, management should be completing and providing this type of analysis both numerically and graphically on a monthly or quarterly basis.

Back testing is only one element of the validation process. It merely identifies that discrepancies exist but does not identify the cause of the discrepancies. This next step of the validation process is equally important since management needs to understand the causes of discrepancies before it can decide on whether adjustments are needed to either the valuation model or any of the forecasting models. Any significant variations from what was projected compared to what was realized should be explained and, if necessary, incorporated into current assumptions. If the discrepancies demonstrate a systemic tendency to result in forecasts that increase the residual interests' values, the nature and source of this bias requires considerable scrutiny by management and the examiners.

## SUMMARY OF EXAMINATION PROCEDURES

While this chapter has provided some examples for assessing the valuation of residual interests, each bank and securitization structure is different and, thus, requires a flexible examination approach. Regardless of the complexities and approaches, the ending values and processes used to get there must make sense and be reasonable. It is incumbent on bank management to demonstrate and document the reasonableness of its techniques and assumptions. The following are general suggestions and are further discussed in the Risk Management and Examination Issues chapter.

Examiners should request the following items from the bank:

- Detailed model documentation on all portions of the model.
- Copies of recent detailed and summary reports from the residual interest models.
- All available documentation of the derivation of critical model assumptions and parameters.
- Documentation of any internally-conducted tests of model results, especially model validation, stress testing, and back testing.
- External auditor's workpapers (in certain situations).

Examiners should expect the bank to have:

- A clear, written model validation policy.
- Written documentation of model validation activity.
- Documentation of model development and construction with clear explanations of underlying analytics and assumptions.
- Reports that can be easily understood and interpreted by senior management, including identifying limitations and caveats of model effectiveness.



## IX REGULATORY CAPITAL

---

### INTRODUCTION

While asset securitizations can enhance both credit availability and a bank's profitability, managing the risks associated with this activity can pose significant challenges. The risks involved, while not new, may be less obvious and more complex than the risks of traditional lending. Specifically, securitizations can involve credit, liquidity, operational, legal, and reputation risks in concentrations and forms that might not be fully recognized by management or adequately incorporated into a bank's risk management systems. The regulatory capital rule provides one important way of addressing the credit risk presented by securitization activities; however, compliance with capital standards should be complemented by effective risk management strategies.

On November 29, 2001, the Federal banking agencies published a final rule revising the regulatory capital treatment of recourse arrangements and direct credit substitutes, including residual interests and credit-enhancing interest-only strips (CE IO strips). This chapter discusses the main components of the current regulatory capital rule, but examiners should refer to Part 325 of the FDIC Rules and Regulations, the Report of Condition and Income (Call Report) instructions, and FIL-99-2001 *Final Rule to Amend the Regulatory Capital Treatment of Recourse Arrangements, Direct Credit Substitutes, Residual Interests in Asset Securitizations, and Asset-Backed and Mortgage-Backed Securities* for additional guidance. Examiners may also want to refer to FIL-54-2002, *Interagency Questions and Answers on the Capital Treatment of Recourse, Direct Credit Substitutes, and Residual Interests in Asset Securitizations*, which clarifies several issues arising from the agencies' final rule on those exposures and provides some examples.

The regulatory capital rule with regard to the treatment of recourse, residual interests, and direct credit substitutes, as amended in November 2001, contains the following broad standards:

- It defines the terms recourse, residual interest and related terms, and direct credit substitute. These definitions are provided later in this chapter.
- It varies the capital requirements for positions in securitization transactions according to their relative risk exposure, using credit ratings from rating agencies to measure the level of risk.
- It permits the limited use of a bank's qualifying internal risk rating system to determine the capital requirement for certain unrated direct credit substitutes.
- It permits the limited use of a rating agency's review of the credit risk of positions in structured programs and qualifying software to determine the capital requirement for certain unrated direct credit substitutes and recourse exposures (but not residual interests).
- It requires a banking organization to deduct CE IO strips, whether retained or purchased, that are in excess of 25 percent of Tier 1 capital from Tier 1 capital and from assets (concentration limit).
- It requires a bank to maintain risk-based capital in an amount equal to the face amount of a residual interest that does not qualify for the ratings-based approach (including CE IO strips that have not been deducted from Tier 1 capital). This is referred to as dollar-for-dollar capital.
- It permits each agency to modify a stated risk-weight, credit conversion factor, or credit equivalent amount, if warranted, on a case-by-case basis.

Examiners should apply this rule to the substance, rather than the form, of a securitization transaction. Regulatory capital should be assessed based on the risks inherent in a position within a securitization, regardless of the risks' characterization.

## DEFINITIONS

### Recourse

Recourse arises from an arrangement in which a bank retains, in form or in substance, the credit risk in connection with an asset sale in accordance with GAAP, if the credit risk exceeds a pro-rata share of the banks claim on the assets. Examples of recourse include off-balance sheet contractual agreements to repurchase assets, spread accounts, cash collateral accounts, retained subordinated certificates, and retained subordinated IO strips.

### Direct Credit Substitute

Direct credit substitutes arise from an arrangement in which a bank assumes, in form or in substance, credit risk associated with an on- or off-balance sheet asset or exposure that was not previously owned by the bank (third-party asset), and the risk assumed exceeds the pro rata share of the bank's interest in the third-party asset. Examples of direct credit substitutes include purchasing a subordinated certificate of another bank's securitization, guaranteeing a mezzanine certificate of another bank's securitization, or providing a letter of credit to an asset-backed commercial paper program.

### Residual Interest

Residual interest refers to any on-balance sheet asset that represents an interest (including a beneficial interest) created by a transfer that qualifies as a sale (in accordance with GAAP) of financial assets, whether through a securitization or otherwise, and that exposes a bank to any credit risk directly or indirectly associated with the transferred asset that exceeds a pro-rata share of that bank's claim on the asset, whether through subordination provisions or other credit enhancement techniques. Residual interests do not include interests purchased from a third-party, except for CE IO strips. When the bank provides credit enhancements internally, as part the securitization structure, through the use of CE IO strips, spread accounts, over collateralization, retained subordinated interests, or other similar on-balance sheet assets, these enhancements are deemed residual interests for regulatory capital purposes and represent a form of recourse.

### Credit-Enhancing Interest-Only Strip (CE IO Strip)

A CE IO strip is an on-balance sheet asset that, in form or in substance, (1) represents the contractual right to receive some of all of the interest due on transferred assets; and (2) exposes the bank to credit risk that exceeds its pro-rata claim on the underlying assets whether through subordination provisions or other credit-enhancing techniques.

CE IO strips are generally carried on the balance sheet at the present value of the expected net cash flow that the bank reasonably expects to receive in future periods on the credit card receivables it has securitized and discounted at an appropriate market discount rate. The accounting requirement for recording the CE IO strip typically results in a gain on the sale of the sold assets since the selling bank is allowed to recognize future expected cash flows at the time of sale. This gain is recognized as income, thus increasing the bank's capital position. In determining whether a particular interest cash flow functions as a CE IO strip, examiners should look to the economic substance of the transaction and determine if other cash flows or spread-related assets represent CE IO strips. For example, including some principal payments with interest and fee cash flows will not otherwise negate the regulatory capital treatment of that asset as a CE IO strip. CE IO strips include both purchased and retained IO strips that serve in a credit-enhancing capacity, even though purchased IO strips generally do not result in the creation of capital on the purchaser's balance sheet.

## Credit-Enhancing Representations and Warranties

To the extent a bank's representations and warranties function as credit enhancements to protect asset purchasers or investors from credit risk, the rule treats them as recourse or direct credit substitutes. However, some warranties are unrelated to ongoing performance or credit quality. Rather, they entail operational risk as opposed to credit risk inherent in a financial guaranty and are excluded from the definitions of recourse and direct credit substitutes.

### Clean-up Calls

A clean-up call is an option that permits a servicer or its affiliate (which may be the originator) to take investors out of their positions in a securitization before all of the transferred loans have been repaid. Under the final rule, an agreement that permits a bank that is a servicer or an affiliate of the servicer to elect to purchase loans in a pool is not recourse or a direct credit substitute if the agreement permits the bank to purchase the remaining loans in a pool when the balance of those loans is equal to or less than 10 percent of the original pool balance. The exemption from recourse or direct credit substitute treatment for a clean-up call of 10 percent or less recognizes the real market need to be able to call a transaction when the costs of keeping it outstanding are burdensome. However, to minimize the potential for using such a feature as a means of providing support for a troubled portfolio, a bank that exercises a clean-up call should not repurchase any loans in the pool that are 30 days or more past due. Alternatively, the bank should repurchase the loans at the lower of their estimated fair value or their par value plus accrued interest. Regardless of the size of the clean-up call, examiners should closely scrutinize any transaction where the bank repurchases deteriorating assets for an amount greater than a reasonable estimate of their fair value.

## RATINGS-BASED APPROACH

The ratings-based approach to assess capital requirements on recourse obligations, residual interests (except CE IO strips), direct credit substitutes, and senior and subordinated certificates in credit card securitizations is based on their relative exposure to credit risk. CE IO strips are excluded from the ratings-based approach because of their higher-risk profile. The rating must be for a securitization exposure; a triple-A rated insurance company providing a guarantee on a securitization tranche does not count as a rating. The ratings-based approach typically uses credit ratings from the rating agencies to measure relative exposure to credit risk and determine the associated risk-based capital requirement, but the rule allows for the use of a bank's qualifying internal risk-rating system and qualifying rating software mapped to public ratings standards. Each of these approaches is discussed in this section.

### Rating Agency Credit Ratings

When using rating agency credit ratings, the capital requirement for a residual interest is computed by multiplying the face amount of the residual interest by the appropriate risk weight determined in accordance with the following table:

Long-Term Rating Category	Examples	Risk Weight (percent)
Highest or second highest investment grade	AAA or AA	20
Third highest investment grade	A	50
Lowest investment grade	BBB	100
One category below investment grade	BB	200
More than one category below investment grade	B or unrated	( <sup>40</sup> )

<sup>40</sup> Not eligible for ratings-based approach.

Short-Term Rating Category	Examples	Risk weight (In percent)
Highest investment grade	A-1, P-1	20
Second highest investment grade	A-2, P-2	50
Lowest investment grade	A-3, P-3	100
Below investment grade	Not prime	( <sup>41</sup> )

The rating agencies do not assign short-term ratings using the same methodology as long-term ratings. Each short-term rating category covers a range of longer-term rating categories. For example, a P-1 rating could map to a long-term rating as high as Aaa or as low as A3. As a result of this distinction, a separate chart with differing criteria is used for short-term ratings.

While the ratings-based approach is available for both traded and un-traded positions, the rule applies different requirements to each. A traded position, for example, is only required to be rated by one rating agency. A position is defined as traded if, at the time it is rated by an external rating agency, there is a reasonable expectation that in the near future: (1) The position may be sold to unaffiliated investors relying on the rating; or (2) an unaffiliated third party may enter into a transaction (e.g., a loan or repurchase agreement) involving the position in which the third party relies on the rating of the position.

Rated, but un-traded, positions may also be eligible for the ratings-based approach if they meet certain conditions. To qualify, the position must be rated by more than one rating agency, the ratings must be one category below investment grade or better for long-term positions (or investment grade or better for short-term positions) by all rating agencies providing a rating, the ratings must be publicly available, and the ratings must be based on the same criteria used to rate securities that are traded. If the ratings are different, the lowest rating will determine the risk-weight category.

An un-rated position that is senior or preferred in all respects (including collateralization and maturity) to a rated, traded position is treated as if it had the rating assigned to the rated position. Senior un-rated positions qualify for the risk weighting of the subordinated rated positions in the same securitization transaction as long as the subordinated rated position (1) is traded and (2) remains outstanding for the entire life of the un-rated position, thus providing full credit support for the term of the un-rated position. If examiners identify a bank that is using the ratings-based approach for an un-rated position, they should review the regulation and the Federal Register for additional information regarding the specific requirements the bank must meet to support its position.

## Use of Internal Risk Ratings

A bank with a qualifying internal risk rating system may use this system to apply the ratings-based approach to the bank's un-rated direct credit substitutes in asset-backed commercial paper programs. Internal risk ratings could be used to qualify such a credit enhancement for a risk weight of 100 or 200 percent under the ratings-based approach, but not for a risk weight of less than 100 percent. This relatively limited use of internal risk ratings for risk-based capital purposes is a step toward the expected broader use of internal risk ratings as discussed in Basel II. More than likely, institutions that apply this approach will also be mandatory or opt-in Basel II institution so the discussion of this topic in this manual is limited. Examiners should refer to the Federal Register and/or the ultimate rule and guidance governing Basel II for further guidance.

## Qualifying Rating Software

Banks, particularly those with limited involvement in securitization activities, can rely on qualifying credit assessment computer programs that the rating agencies have developed to rate otherwise

<sup>41</sup> Not eligible for ratings-based approach.

un-rated direct credit substitutes and recourse obligations (but not residual interests) in asset securitizations.

In order to qualify for use by a bank for risk-based capital purposes, a computer program's credit assessments must correspond credibly and reliably to the rating agencies' rating standards for traded positions in securitizations. A bank must demonstrate to the examiners the credibility of the computer program in the financial markets, which would generally be shown by the significant use of the computer program by investors and other market participants for risk assessment purposes. Examiners should also expect the bank to demonstrate the reliability of the program in assessing credit risk. Furthermore, examiners must be satisfied with the bank's ability to demonstrate that the program results in credit risk assessments that credibly and reliably correspond with the rating agencies' ratings of traded positions. Examiners should also expect management to demonstrate that the program was designed to apply to its particular direct credit substitute or recourse exposure and that it has properly implemented the computer program.

Sophisticated banking organizations with extensive securitization activities generally should use this approach only if it is an integral part of their risk management systems and their systems fully capture the risks from its securitization activities. This approach can be used to qualify a direct credit substitute or recourse obligation (but not a residual interest) for a risk weight of 100 percent or 200 percent of the face value of the position, but not for a risk weight of less than 100 percent. Residual interests that are not eligible for the ratings-based approach will receive dollar-for-dollar treatment, which is discussed in the next section.

## CAPITAL CHARGES FOR RESIDUAL INTERESTS

The capital rule imposes a concentration limit on CE IO strips and a dollar-for-dollar capital charge on residual interests. In no event will this combined capital charge exceed the face amount of a bank's residual interests (**low-level exposure rule**).

### Concentration Limit

For regulatory capital purposes, CE IO strips, whether retained or purchased, are limited to 25 percent of Tier 1 capital. Any amount of CE IO strips that exceeds the 25 percent limit is deducted from Tier 1 capital and from assets for regulatory capital purposes. CE IO strips that are not deducted from Tier 1 capital, along with all other residual interests not subject to the concentration limit, are subject to the dollar-for-dollar capital requirement (as described later). In this manner, banks will not be required to hold capital for more than 100 percent of the amount of the residual interest. The following example illustrates the concentration calculation required for banks that hold CE IO strips.

A bank has purchased and retained CE IO strips with a face amount of \$100 on its balance sheet and has Tier 1 capital of \$320 (before any disallowed servicing assets, disallowed purchased credit card relationships, disallowed CE IO strips, and disallowed deferred tax assets). To determine the amount of CE IO strips that fall within the concentration limit, the bank would multiply the Tier 1 capital of \$320 by 25 percent, which is \$80. The amount of CE IO strips that exceeds the concentration limit, in this case \$20, is deducted from Tier 1 capital and from assets. For risk-based capital purposes (but not for leverage capital purposes), the remaining \$80 is then subject to the dollar-for-dollar capital charge discussed later.

Only CE IO strips are subject to the concentration limitation in recognition of the fact that these assets generally serve in a first loss capacity and are typically the most vulnerable to significant write-downs due to changes in valuation assumptions. In addition, CE IO strips are the asset type most often associated with the creation of capital as a result of gain-on-sale accounting, which allows a bank to leverage the capital created based on the current recognition of uncertain future cash flows.

## Dollar-for-Dollar Capital Charge

The current minimum regulatory capital standard more closely aligns capital with risk, and it, along with supervisory reviews, is viewed as the appropriate course of action in dealing with residual interests. Elevated credit risk exposure is associated with deeply-subordinated assets, particularly sub-investment grade and un-rated residual interests. In addition, the lack of an active market makes these assets difficult to value and relatively illiquid. As a result of these elevated risk exposures, all residual interests that do not qualify for the ratings-based approach (including retained and purchased CE IO strips that have not been deducted from Tier 1 capital) are assessed a dollar-for-dollar capital charge for risk-based capital purposes (but not for leverage capital purposes).

This charge requires that banks hold one dollar in capital for every dollar in residual interests, even if this capital requirement exceeds the full risk-based capital charge on the assets transferred. In many cases, the relative size of the retained exposure reveals additional market information about the quality of the securitized assets. To facilitate a transaction in a manner that meets with market acceptance, the securitization sponsor will often increase the size of the residual interests. This practice is often indicative of the quality of the underlying asset pool. In other words, large residual positions (total credit enhancements as a percentage of the total deal) often signal lower credit quality of the sold assets. Further a bank's use of gain-on-sale accounting affords it the opportunity to create capital, the amount of which is related to a residual interest that may not be worth its reported carrying value. Thus, to mitigate the effects of these gains, the capital rules require banks to hold dollar-for-dollar capital against the related assets.

Because these assets are a subordinated interest in the future cash flows of the securitized assets, they have a concentration of credit risk that, depending upon the life of the underlying asset, makes them vulnerable to sudden and sizeable impairment. In addition, when given sale accounting recognition, certain residuals, such as retained CE IO strips, have the effect of creating capital, which may not be available to support these assets if write-downs become necessary. Recent experience has shown that residual interests can be among the riskiest assets on the balance sheet and, therefore, most deserving of a higher capital charge.

Continuing the illustration for CE IO strips from the Concentration Limit section, once a bank deducts the \$20 in disallowed CE IO strips, it must hold \$80 in total capital for the \$80 that represents the CE IO strips not deducted from Tier 1 capital. The \$20 deducted from Tier 1 capital, plus the \$80 in total risk-based capital required under the dollar-for-dollar treatment, equals \$100, the face amount of the CE IO strips. In certain instances, banks may end up holding more capital against the residual interests than it would have held if the receivables had not been securitized. For example, assume a bank sells \$100 of credit card receivables and deposits \$14 into a cash collateral account which helps protect investors from losses. The bank books this cash collateral account at its fair market value of \$12 on its balance sheet. The total minimum risk-based capital requirement is \$12, which in this example is more capital than what the bank was required to hold prior to securitizing the receivables, which was \$8.

Banks may apply a net-of-tax approach to any CE IO strips that have to be deducted from Tier 1 capital, as well as to the remaining residual interests subject to the dollar-for-dollar treatment. Under this method, a bank is permitted, but not required, to net the deferred tax liabilities recorded on its balance sheet, if any, that are associated with the residual interests. This method may result in a bank holding less than 100 percent capital against residual interests.

The risk-based capital standards include a low-level exposure rule, which states that if the maximum exposure to loss retained or assumed by a bank in connection with a recourse arrangement, a direct credit substitute, or a residual interest is less than the effective risk-based capital requirement for the credit-enhanced assets (generally eight percent for credit card receivables), the risk-based capital requirement is limited to the bank's maximum contractual exposure, less any recourse liability account established in accordance with GAAP. The

instructions for schedule RC-R-Regulatory Capital in the Report of Condition provides further explanations and an example of the two methods used to calculate risk-based capital requirements, the **direct reduction method** and the **gross-up method**.

When using the direct reduction method, a bank includes an institution-specific amount in its risk-weighted assets for its maximum contractual dollar amount of exposure that is calculated using the actual amount of the bank's total risk-based capital. This institution-specific calculation produces the effect of directly reducing Tier 1 and total risk-based capital by the maximum contractual dollar amount of exposure without lowering the bank's Tier 1 leverage capital ratio. For a bank whose risk-based capital ratios exceed the required minimums, it is normally preferable to use the direct reduction method. When using the gross-up method, a bank includes an amount in its risk-weighted assets for its maximum contractual dollar amount of exposure that is calculated under the assumption that the bank's total risk-based capital ratio equals the eight percent minimum requirement.

## IMPLICIT RECOURSE

If the selling institution provides credit support, beyond contractual obligations, to receivables considered sold under GAAP, it may be providing implicit recourse. As discussed in the Credit Enhancement and Early Amortization Chapter, the originating or selling institution usually retains significant credit risk through credit enhancements, which represent contractual obligations that protect the investors from some level of credit losses. For regulatory capital purposes, and as discussed earlier in this section, these contractual obligations are characterized as residual interests or as other recourse obligations.

In contrast to contractual recourse exposures, implicit recourse arises when the selling bank provides post-sale support to the securitization in excess of its contractual obligation. If a bank is providing such support, it is generally required to hold capital against the entire outstanding amount of receivables sold for risk-based capital purposes. To address implicit recourse, the Federal banking agencies issued FIL-52-2002, *Interagency Guidance on Implicit Recourse in Asset Securitizations*. The document provides practical interpretative guidance on non-contractual recourse determinations.

A bank can provide implicit recourse in a variety of ways; however, the following post-sale actions typically point to implicit recourse:

- Selling assets to the securitization vehicle at a discount from the price specified in the securitization documents.
- Purchasing assets from the securitization vehicle at an amount greater than fair value.
- Exchanging performing assets for nonperforming assets.
- Funding credit enhancements beyond contractual requirements.

As noted in the Accounting chapter, if any of the above situations were allowed at the time the transaction took place, the transaction would not qualify as a sale under GAAP. However, if a bank is providing such support after the initial sale, it stands to reason that the underlying receivables should not be treated as sold for regulatory capital purposes, and that the bank should hold capital against these assets as if they were still on the bank's balance sheet.

Banks have an incentive to provide implicit recourse, thus avoiding early amortization and protecting its reputation and access to the ABS market (**moral recourse**). Given this incentive, examiners should, at a minimum:

- Be alert for securitizations that are approaching early amortization triggers, such as a decrease in the excess spread below the required threshold.
- Review the pooling and servicing agreement to determine what post-sale support, if any, these documents require the seller to provide.

- Review a sample of receivables transferred between the seller and the securitization vehicle to ensure the transfers were conducted in accordance with the contractual terms of the securitization, particularly when overall credit quality of the securitized receivables has deteriorated.

While banks are not prohibited from providing implicit recourse, such support will generally result in higher capital requirements. The FDIC will take supervisory action when implicit recourse is identified. To determine the appropriate action, examiners must fully understand the bank's reasons for providing support and the extent of the actual or potential impact of this support on the bank's earnings and capital. If implicit recourse is deemed to exist, the FDIC may take any number of actions, including, but not limited to, the following:

- Requiring the bank to bring all securitized receivables "back on the balance sheet" for risk-based capital purposes and to increase its minimum capital ratios.
- Preventing a bank from removing assets from its risk-weighted asset base on future transactions until the bank demonstrates its intent and ability to transfer risk to the marketplace.
- Taking other actions to ensure that the risks associated with implicit recourse are adequately reflected in the capital ratios. For example, the FDIC may require the bank to deduct residual interests from Tier 1 capital as well as hold risk-based capital on the underlying assets.

Because of the case-specific nature of implicit recourse, FIL-52-2002 includes illustrative questions and answers about a variety of post-sale actions. The examples are intended to provide guidance on whether the selected actions would give rise to a determination of implicit recourse but are by no means all-inclusive of facts and circumstances that could lead to a determination of implicit recourse. The use of common sense and judgment are critical in determining the potential existence of implicit recourse. A key factor in any scenario is evaluating whether the bank's post-sale actions expose its earnings or capital to actual or potential greater losses from the assets that have been sold than would have been the case had the bank not taken these actions. Examiners should contact the respective case manager, capital markets specialist, or accounting specialist when potential cases of implicit recourse are evident. Ideally, examiners should encourage management to discuss the facts and circumstances with regulators prior to taking any action that might be perceived as non-contractual support. Proactive communication aids in developing a common understanding of the potential regulatory capital and supervisory consequences of the contemplated action. Even if an action is not determined to be implicit recourse, it may likely still present risk to the bank.

### Accrued Interest Receivable (AIR)

In general, the AIR asset represents a subordinated residual interest in cash flows that are initially allocated to the investors' portion of a credit card securitization. The AIR is subject to higher capital requirements under the agencies' capital standards. FIL-48-2002, *Interagency Advisory on the Regulatory Capital Treatment of Accrued Interest Receivable Related to Credit Card Securitizations*, clarifies the appropriate risk-based capital treatment for the AIR. This section focuses on the risk-based capital treatment of this asset whereas the Accounting chapter discusses the appropriate accounting treatment and the Residual Interest Valuation and Modeling chapter discusses valuation of the AIR.

The guidance discusses the reasons why the AIR is considered a subordinated interest with the main reason being that if and when the bank collects any portion of the AIR, the cash collected is included in the cash flow that runs through the securitization vehicle. The seller is entitled to excess cash flow only after all trust expenses, including investor-principal losses, have been paid.



The seller's right to the excess cash flows related to the AIR asset serves as a credit enhancement to protect third-party investors in the securitization from credit losses. Since the AIR represents a subordinated residual interest in the transferred assets, it meets the definition of a recourse exposure for risk-based capital purposes, and as such, the bank must hold risk-based capital against the full, risk-weighted amount of the assets transferred with recourse, subject to the low-level recourse rule. Further, the AIR asset also meets the definition of a residual interest, which requires dollar-for-dollar capital even if that amount exceeds the full equivalent risk-based capital charge on the transferred assets.

## X RISK MANAGEMENT AND EXAMINATION ISSUES

---

### INTRODUCTION

Asset securitization typically involves the transfer of on-balance sheet assets to a third party or trust. In turn the third party or trust issues certificates or notes to investors. The cash flow from the transferred assets supports repayment of the certificates or notes. For several years, large financial institutions, and a growing number of regional and community institutions, have been using asset securitizations to access alternative funding sources, manage concentrations, improve financial performance ratios, and more efficiently meet customer needs. In many cases, the discipline imposed by investors who buy assets at their fair value has sharpened selling institutions' credit risk selection, underwriting, and pricing practices.

A bank's strategic decision to engage in securitization activities should only be made in the context of the bank's overall growth plans, profitability objectives, funding alternatives, and operational capacities. Examiners should expect management and the board to:

- Have the request knowledge of the effects of securitization on the risk profile of the bank and be fully aware of the accounting, legal, and risk-based capital nuances associated with this activity.
- Understand the impact market and economic conditions will have on the nature of the risks inherent to securitization activities.
- Identify and clearly understand those risks that remain with the bank after the credit card receivables have been transferred to investors and credit enhancement providers.
- Fully and accurately distinguish and measure the risks that have been transferred versus those that have been retained and adequately manage both the retained and sold portions.

This chapter discusses the risks present in securitization activities, management's responsibilities to mitigate risks, reporting requirements, and examination considerations. In 1999, the Federal banking agencies issued FIL-109-99, *Interagency Guidance on Asset Securitization Activities* (Asset Securitization Guidance) to highlight the importance of fundamental risk management practices governing asset securitization activities. In addition to many other considerations, this chapter encompasses the bulk of this guidance, updated to reflect certain changes in regulatory and accounting rules.

### ASSESSING THE RISK

The risks associated with securitization activities are credit, liquidity, reputation, operational (includes transaction, compliance, and legal risk), and strategic risk. In accordance with the Asset Securitization Guidance, examiners should assess management's understanding of these risks and whether or not management takes appropriate steps to minimize, measure, monitor, and control the bank's exposure to these risks. Management is expected to develop a framework within which securitization risks can be effectively monitored from inception to final maturity. These risks are presented in more detail below with the more significant risks presented first.

#### Credit Risk

Credit risk arises from the cardholders' failures to repay their credit card debts or other wise perform as agreed. Securitization structures are designed to reduce the credit exposure of the assets sold by transferring the unexpected portion of the default risk to credit enhancement providers and investors. Typically, the bank serves as the credit enhancement provider by either retaining a subordinated bond, CEIO strip, or other type of credit enhancement. The first loss

exposure assumed by the bank as the originator and often the servicer of the receivables is a function of its acceptance of excess portfolio yield as a residual interest. As pool performance deteriorates and charge-offs increase, excess spreads decline and thus the value of the CE IO strip declines. Once the excess spread is exhausted, the risks of credit default then customarily shift to the other credit enhancements, including those retained by the bank, such as spread accounts or subordinated bonds. Since losses significant enough to trigger early amortization events have been infrequent, plus the originating bank typically holds the most subordinated bond, the bank, in effect, retains most of the credit risks of the receivables even if they have been considered sold for accounting purposes. This retention of credit risk on the underlying receivables is not always apparent since it is concentrated in a smaller residual interest. This retained risk, coupled with improper residual interest valuations and “paper profits” generated by the sales accounting, were the catalysts for the 2001 revisions of the regulatory capital standards to address the treatment of recourse obligations, residual interests, and direct credit substitutes that expose banking organizations primarily to credit risk.

In addition, loan performance that deviates from the projected performance reflects poorly on the underwriting and risk assessment capabilities of the originating bank. Credit card receivable performance is publicly available and monitored by market participants and the rating agencies. Poor credit quality and performance may limit the bank’s future access to the securitization markets, affecting the pricing of subsequent issues or impacting funding costs from alternative sources. Therefore, in addition to the credit risk existing in on-book residual interests, the bank also retains an additional degree of credit risk attributed to moral recourse. Banks may be compelled to absorb more losses or provide greater credit enhancements than contractually required in the securitization documents in order to preserve its reputation with the markets, and, thus, its access to market funding. However, bank management needs to be extremely cautious when providing non-contractual enhancements as they could be viewed as implicit recourse. A determination of implicit recourse could compromise the transaction’s legal standing as a sale, which could have material implications on both funding and capital positions and perhaps tax consequences. The Regulatory Capital, Designation of Receivables, and Credit Enhancement Chapters provide further discussions on implicit recourse.

Since originating banks absorb most of the expected losses from both on- and off-balance sheet and securitized pools, examiners should expect management to instill sound underwriting and credit administration practices to protect against excessive credit risk and losses. The Risk Management Examination Manual for Credit Card Activities provides considerable information regarding the entire underwriting, monitoring, and credit administration practices. Examiners reviewing securitization activities should coordinate their review with those examiners reviewing asset quality and credit administration practices for the on-book receivables. Bank management is expected to insure that all loans, retained and sold, are subject to the same underwriting and administration practices. In addition to prudent underwriting, bank management should produce and examiners should review the various monitoring reports, which should incorporate reporting on a managed basis, to assess the credit risk exposure and its potential impact to earnings and capital.

While credit risk is viewed as the most significant risk that needs to be managed for any credit card issuing bank, managing credit risk for a bank that also uses the securitization market for funding takes on another dimension since it also impact a bank’s ability to access and maintain this funding source. Poor performance of the underlying receivables could limit this funding source or, in a worst-case scenario, lead to an early amortization event and perhaps a liquidity crisis that could threaten the bank’s viability.

## Liquidity Risk

Liquidity risk arises from a bank’s inability to manage unplanned changes in funding sources, which if significant could threaten its viability, or in meeting its obligations at a reasonable cost without incurring significant losses. Securitizations can provide liquidity for balance sheet assets

as well as funding for leveraging origination capacity but it can also *increase* liquidity risk. The possibility that the bank may not be able to sell subsequent charges on the accounts and may need to fund these on balance-sheet as a result of either scheduled or early amortization raises liquidity concerns. Liquidity risk also arises from the bank's failure to recognize or address changes in market conditions that may impact its ability to liquidate assets quickly and with minimal loss.

Securitizations provide banks with a ready source of managed liquidity, particularly given the advent of the de-linked structure, and also increase a bank's access to, and presence in, the capital markets. While securitizations can provide an attractive alternative funding source, too much reliance on any single funding vehicle increases liquidity risk. Monoline credit card companies typically rely heavily on the securitization market for funding given their lack of a retail banking network and access to core deposit funding. In addition to securitizations, monolines typically fund with higher-cost wholesale funds, such as brokered deposits and borrowings. Securitizations often provide a cheaper **all-in funding cost**.

The primary liquidity risk is the potential that a large pool of assets could require balance sheet funding at unexpected or unplanned (or ill-planned) times. This risk is magnified in banks where management does not properly structure maturities of individual series within the master trust and thus creates maturity concentrations.

In order to appropriately manage liquidity risk, examiners should expect management to factor implications of securitization into daily and intermediate- to long-term liquidity planning, strategic planning, and contingency planning. Each asset sale should be viewed not only for its individual impact on funding but also for its effects on the aggregate funding position. For example, management should determine if each securitization transaction, particularly if it is sufficiently large, creates a potentially unsafe concentration in this type of funding, creates a maturity concentration, or its structure results in excessive volumes of residual interests held on the balance sheet.

Examiners should review the liquidity implications of the bank's securitization activities in relation to the bank's normal liquidity management process, including contingency planning. Liquidity factors to consider include, but are not limited to:

- The number of transactions or volume of certificates scheduled to amortize in a particular period of time.
- The length of amortization periods (bullet, one month, six months, etc.).
- The existence and type of early amortization triggers.
- Management's plans and timing for meeting future funding requirements.
- Plans for new issuances.
- Alternative sources of funding.
- Operational concerns associated with new issuances.

At a minimum, contingency planning should include the identification of alternative funding sources available for the full amount of securities expected to amortize over the next reporting period. Contingency plans should also provide for funding alternatives in the event of a complete withdrawal from the securitization market or in the event of a reduction in credit availability.

Early warnings mechanisms related to early amortization triggers, which are often set off by three successive months of negative cash flows (excess spread) on the pool of receivables, should be in place. Prudent monitoring allows management to be alerted well in advance of approaching triggers so that preventative measures can be considered and incorporated into shorter-term liquidity planning.

## Capital Risk

Even if the bank has sufficient funding sources available, the bank may have insufficient capital to support unplanned balance sheet growth related to a complete withdrawal from the securitization market. Most banks that securitize credit card receivables will internally establish minimum capital to managed assets levels and report this information in public documents.

Ultimately, capital must be sufficient to absorb or protect against losses arising from credit and other factors. These other factors include having sufficient capital to:

- Possibly fund new receivables if access to the securitization market is eliminated or curtailed.
- Withstand additional costs associated with funding in poor market conditions.
- Protect against losses arising from inadequate servicing, reimbursements or fines arising from failing to comply with all consumer laws and regulations, reimbursements arising from representations and warranties made in support of the transaction, or any other losses stemming from other legal liabilities.

## Reputation Risk

A negative reputation primarily impacts a bank's ability to obtain reasonable funding and thus presents liquidity risk. Reputation risk is the risk to liquidity, earnings, and capital arising from negative public perception. Reputation risk can expose the bank to difficulty accessing the markets for funding (includes securitizations, stock issuances, and debt issuances), acquiring and retaining customers, and increased legal and regulatory scrutiny that could result in fines, reimbursements, and possibly stricter rules. Poor lending decisions and operational controls could lead to a damaged reputation.

Reputation risk also has a qualitative nature, reflecting the strength of an organization's franchise value and how it is perceived by other market participants. This perception is usually tied to performance over time. A credit card issuing and securitizing bank, arguably, stakes its reputation most heavily on the quality of the underlying receivables and the efficiency at which it can service those receivables.

Asset performance that falls short of expectations will reflect poorly on the underwriting and risk assessment and selection capabilities of the bank. Since the performance of the securitized pool is publicly disclosed and closely monitored, market participants will quickly highlight potential problems that may have been less obvious if the bank was not actively seeking funding from the markets. The best evidence of how the market perceives a particular securitizer is how it accepts and prices newly-issued certificates or notes. Acceptance and pricing include subscription levels (under or over subscribed), enhancement requirements, and required pricing spreads.

The most effective method of controlling reputation risk is by establishing and operating within a sound business plan complimented by prudent and effective risk management and control frameworks. As noted previously, the need to maintain a good reputation in the markets can entice management to provide non-contractual support to the securitized pool of assets in order to improve the pool's performance. By doing so, management needs to be fully cognizant of the potential long-term market, accounting, legal, and regulatory consequences since such actions could result in a determination of implicit recourse.

## Operational Risk

Operational risk is defined as the risk to earnings and capital from inadequate or failed internal processes, people or systems, or from external events; and from the processes for measuring, monitoring and controlling these exposures. Operational risk includes, but is not limited to,

transaction, compliance, and legal risks. Losses sustained and/or publicity surrounding process or system failures can harm the bank's reputation and thus its access to funding sources as well.

Transaction risk is a function of the bank's internal controls, information systems, employee integrity, and operating procedures. Transaction risk increases when the business activity is complex, such as with securitizations, and management does not fully understand its responsibilities. This risk is inherently heightened when management is responsible for the servicing and administration of the credit card receivables. As servicer, the bank is responsible for a variety of functions. Poor administration of these responsibilities, such as incorrect loan and payment processing, insufficient collections of delinquent payments, untimely or inaccurate investor reporting, and other servicing problems, increases the bank's expose to transaction risk.

Transaction processing can increase considerably if the bank's decision to embark on securitizations and leverage origination capacity results in rapid growth without sufficient systems capacity or personnel. Excessive volumes may overextend the existing systems and personnel and contribute to technical and human error. In addition, management, investors, regulators, and the rating agencies require a variety of timely and accurate reporting. This task can become more complex if it involves loan sources from multiple affiliates with different processing and reporting systems, multiple asset pools such as those acquired via a merger or acquisition, or when bank-sponsored conduits have pooled receivables from various third-party originators. Trustees and investors have little tolerance for errors in reporting.

Operational risk increases if the bank expands or enters into new markets and products that are then sold into the securitization vehicle. For example, if a bank expands into the subprime market, it may not have sufficient underwriting, collection, or monitoring expertise that is typically associated with higher-risk borrowers. Or, it may not have sufficient information systems capacity or flexibility to address new products. For example, a bank may decide to offer a rewards program, but lacks sufficient coordination, capacity, or expertise to adequately monitor and capture the rewards program and respective points. Examiners should expect management to have developed system enhancements that provide timely and accurate information on the securitized and on-book portfolios.

Consumer complaints usually stem from servicing or loan quality issues. Complaint monitoring allows management to assess potential legal or reputation risk associated with servicing the underlying assets. Non-conformance or violations of laws, rules, regulations, prescribed practices, ethical standards, and governing contracts could present compliance and ultimately legal risk. Compliance risk arises in situations where the laws or rules governing certain bank products or activities of the bank may be ambiguous or untested. Compliance risk also exposes the bank to fines, civil money penalties, restitution or reimbursement, reduced franchise value, limited business opportunities, lessened expansion potential, and lack of contract enforceability.

Since the bank remains the owner of the accounts even when the receivables are sold and securitized, it is still responsible for compliance with consumer laws and regulations, including fair lending and other anti-discrimination laws, affecting the underwriting and servicing practices of the bank. The complex and changing nature of securitization activities requires knowledgeable and experienced management and guidance from competent professionals, such as accountants, attorneys, investment bankers, and others. It is reasonable to expect that management has provided for review by legal and accounting professional any initial structure decisions and any new or unusual actions proposed by management during the life of a series.

## Strategic Risk

Poor strategic planning and managerial decisions can place a bank's liquidity, earnings, and capital at risk and should be reflected primarily in the management assessment and rating. Examiners are charged with determining if a bank's decision to engage in securitization activities is prudently accompanied by sufficient resources to carry out the strategic goals. These

resources include proper communication channels, operating systems, delivery networks, reporting systems, and managerial capacity and capabilities. Before the bank participated in securitization activities, management should have performed a risk assessment to determine if the risks involved and the resources available were consistent with the bank's overall strategic and financial objectives. Examiners should review the risk assessment and determine if, at a minimum, it includes the following:

- An evaluation of the cost of securitizing credit card receivables compared to the cost of alternative funding sources, including any additional or upgrades in technology and personnel, particularly if also providing the servicing.
- An assessment of the initial cost of the transaction.
- A determination as to the ongoing costs and attendant risks related to each series.

This analysis should be fully documented and support management's decision to engage in securitization activities. The personnel involved in the securitization process should be delineated and made a part of management's analysis and risk assessment.

## MANAGEMENT RESPONSIBILITIES

The foremost responsibility of management is to assess the risks involved in the securitization of credit card receivables before the bank participates in such activities. Once the risks are assessed, management should integrate all securitization activities into the bank's strategic plan. At a minimum, the strategic plan should include liquidity objectives, performance objectives, and procedures for maintaining capital levels commensurate to the risks involved. Examiners should determine if proper policies and procedures were in place before the bank engaged in securitization activities. Those policies should address and provide guidance in these areas:

- Accounting.
- Managing the legal risk.
- Minimizing conflicts of interest.
- Avoiding undue concentrations in the pool of credit card receivables.
- On-going monitoring.

Sound operating policies and procedures are critical to management's ability to identify, measure, monitor, and control the risks associated with securitization activities. In accordance with the Asset Securitization Guidance, examiners should expect that the bank has appropriate front- and back-office staffing, internal and external accounting expertise, legal support, audit or independent review coverage, information systems capacity, and oversight mechanisms to execute, record, and administer these transactions correctly.

As noted in the Residual Interest Valuation and Modeling Chapter, unforeseen market events that affect the performance of the underlying receivables or the discount rate supporting the residual interest can dramatically impact the value of the residual interest and, thus, impact earnings and capital. Without appropriate internal controls and independent oversight, a bank that securitizes credit card receivables may inappropriately report higher earnings performance and capital level.

When the bank engages in securitization activities, examiners should assess whether or not its management has provided for and requires:

- Independent risk management processes designed to monitor securitization pool performance.
- Conservative valuation assumptions and modeling methodologies to establish, evaluate, and adjust the carrying value of residual interests on a regular and timely basis.
- Audit or internal review staffs to periodically review data integrity, model algorithms, key underlying assumptions, and the appropriateness of the valuation and modeling process

for the residual interests retained by the bank. The findings of such a review should be reported directly to the board or an appropriate board committee.

- Accurate and timely risk-based capital calculations, including recognition and reporting of any recourse obligation, implicit or direct.
- Internal limits to govern the maximum amount of residual interests as a percentage of total equity capital.
- The institution to have a realistic liquidity plan in place in case of market disruptions.

## Independent Risk Management Function

Examiners should expect institutions engaged in securitization activities to have an independent risk management function commensurate with the complexity and volume of their securitizations and their overall risk exposures. The risk management function should ensure that securitization policies and operating procedures, including clearly articulated risk limits, are in place and appropriate for the bank's circumstances. A sound asset securitization policy should include, at a minimum:

- A written and consistently applied accounting methodology.
- Regulatory and investor reporting requirements.
- Valuation methods, including a description of the valuation model's construction and assumptions and procedures to formally approve changes to the assumptions.
- A management reporting process.
- Exposure limits and requirements for both aggregate and individual transaction monitoring.
- Limits on the amount of residual interests that may be carried as a percentage of total equity capital, based on the results of the valuation and modeling processes.

The risk management function should monitor origination, collection, and default management practices. This includes regular evaluations of the quality of underwriting, effectiveness of collections activities, ability to resolve severely delinquent loans in a timely and efficient manner, and the appropriateness of loss recognition practices. Because securitization can result in the current recognition of anticipated income, the risk management function should also address the types, volumes, and risks of assets being originated, transferred, and serviced. Examiners should be on the look out for any pressures placed on line managers to originate abnormally large volumes or higher-risk assets in order to sustain ongoing income needs. Such pressures can lead to compromised credit underwriting standards which potentially accelerate credit losses in future periods, impair the value of residual interests, and potentially lead to funding problems.

In accordance with the Asset Securitization Guidance, examiners should expect that the bank has appropriate management information systems (MIS) in place to monitor securitization activities. Reporting and documentation methods should support the initial valuation of residual interests and ongoing impairment analyses of these assets. Pool performance information has helped well-managed institutions to ensure that a sufficient amount of economic capital is being held to cover the various risks inherent in securitization transactions. The absence of quality MIS hinders management's ability to monitor specific pool performance and securitization activities more broadly. At a minimum, examiners should expect the MIS reports to address the following:

- *Securitization summaries for each transaction* - The summary should include relevant transaction terms such as collateral type, facility amount, maturity, credit enhancement and subordination features, financial covenants (termination events and spread account capture triggers), right of repurchase, and counterparty exposures. The summaries should be distributed to all personnel responsible for securitization activities.
- *Performance reports by portfolio and specific product type* - Performance factors include gross portfolio yield, charge-off rate, delinquencies, payments, and excess spread amounts. The reports should reflect performance of the credit card receivables, both on



- balance sheet and managed. These reports should segregate specific products and marketing campaigns.
- *Vintage analysis using monthly data* - Vintage analysis helps management understand historical performance trends and their implications for future default rates, principal payment rates, and delinquencies, and, therefore, residual interest values. Vintage analysis helps in the comparison of deal performance at periodic intervals and validates residual interest valuation assumptions.
  - *Static pool cash collection analysis* - This analysis entails reviewing monthly cash receipts relative to the principal balance of the pool to determine the cash yield on the portfolio, comparing the cash yield to the accrual yield, and tracking changes. On a monthly basis, management should be comparing the timing and amount of cash flows received from the trust with those projected as part of the residual interest valuation analysis consistent with FAS 140. These analyses are essential in assessing the actual performance of the portfolio. If cash receipts are less than those assumed in the original valuation of the residual interest, this analysis provides management with an early warning of possible problems with collections or extension practices and impairment of the residual interests. This type of analysis is expanded upon in the Back Testing Section of the Residual Interest Valuation and Modeling chapter.
  - *Sensitivity analysis* - Measuring the effect of changes in yields, default rates, principal payment rates, and discount rates assists management in establishing and validating the carrying value of residual interests. Stress tests should be performed at least quarterly. Analyses should consider potential adverse trends and determine “best,” “probable,” and “worst case” scenarios for each event. Other factors to consider are the impact of increased defaults on collections staffing, the timing of cash flows, spread account capture triggers, and early amortization triggers. An increase in defaults can result in higher than expected costs and a delay in cash flows, thereby decreasing the value of the residual interests. Management should be periodically quantifying and documenting the potential impact to earnings and capital and reporting the results to the board. Management should be incorporating this analysis into its overall interest rate risk measurement system. Examiners should review the analysis conducted by management and the volatility associated with residual interests when assessing the Sensitivity to Market Risk component rating. Stress Testing is expanded upon in the Residual Interest Valuation and Modeling chapter.
  - *Statement of covenant compliance* - Ongoing compliance with each series’ performance triggers as defined by the pooling and servicing agreements should be affirmed at least monthly. Performance triggers include early amortization, spread capture, and events that would result in servicer removal. Examiners should review the report to ensure that the triggers are calculated correctly as specified in the prospectus, pooling and servicing agreement, or offering circular.

Examiners should also compare internal performance reports with those provided to investors and the regulatory agencies. Management should be able to reconcile any discrepancies, which often occur due to different calculation time frames, such as one month annualized, one quarter annualized, or year-to-date annualized performance ratios.

Effective internal routines and controls are essential to managing risks associated with securitization activities. When properly designed and consistently enforced, a sound system of internal control over all securitization activities helps management safeguard the bank’s resources; ensure that financial information and reports are reliable; and comply with contractual obligations, including securitization covenants. It will also reduce the possibility of significant errors and irregularities, as well as assist in timely detection when they do occur. The Committee of Sponsoring Organizations of the Treadway Committee (COSO) issued *Internal Control over Financial Reporting – Guidance for Smaller Public Companies* in June 2006, which examiners may reference for additional guidance when assessing smaller public companies that are involved in credit card securitizations.

Internal routine and controls typically include:

- Limiting authorities.
- Safeguarding access to and use of records.
- Separating and rotating duties.
- Ensuring both regular and unscheduled reviews, including testing.

Examiners should assess the institution's internal control structure and requirements to determine whether it is appropriate for the bank's size and the nature, scope, and risk of its activities. The management of institutions that are subject to the requirements of FDIC regulation Part 363 of the FDIC's regulations *Annual Independent Audits and Reporting Requirements* and have \$1 billion or more in total assets should be performing an assessment of the effectiveness of the internal controls over those elements of their securitization activities that affect the information reported in the financial statements as part of management's assessment of the overall effectiveness of the internal control structure and procedures for financial reporting. The assessment implicitly includes the internal controls over financial information that is included in regulatory reports.

## Valuation and Modeling Processes

The method and key assumptions used to value the residual interests and servicing assets or liabilities must be reasonable and fully documented. Examiners need to determine if management takes a logical and conservative approach when developing assumptions and capitalizing future income flows. The assumptions should be quantified and any changes to the assumptions should be fully documented as part of management's valuation process, which should be done no less than quarterly. Policies should define the acceptable reasons for changing assumptions and require appropriate management approval.

In order to determine the value of the residual interest at inception and make appropriate adjustments going forward, the institution must be implementing a reasonable modeling process. Examiners should review the valuation assumptions and projections to determine if they are reasonable and conservative and that management maintains verifiable objective documentation of the fair value of the residual interest. Senior management is responsible for ensuring the valuation model accurately reflects the cash flows according to the terms of the securitization's structure. In accordance with the Asset Securitization Guidance, the board and management are accountable for ensuring that those individuals responsible for building the model or reviewing the acquisition of the model possess the necessary expertise and technical proficiency.

As part of the modeling process, examiners should expect that the risk management function ensures that periodic validations are performed in order to reduce vulnerability to model risk. The audit scope should include procedures to ensure that the modeling process and validation mechanisms are both appropriate for the institution's circumstances and executed consistent with the institution's asset securitization policy. Valuation and modeling, including validation, are discussed in detail in the Residual Interest Valuation and Modeling chapter.

## Use of Outside Parties

Banks often engage third parties to provide professional guidance and support regarding securitization activities, structures, and transactions. In addition, third parties are frequently used for core operating functions, such as for developing the valuation model (both its construction and the assumptions used), validating the accuracy of the model and integrity of the model's assumptions, and providing internal and/or external audit functions. Some institutions may also outsource other core functions such as marketing, underwriting, and servicing of the underlying receivables. The use of outside resources, especially for those core functions noted above, does not relieve directors of their oversight responsibility. Nor does it relieve senior management of its responsibilities to provide supervision, monitoring, and oversight of securitization activities, and the management of the risks associated with residual interests in particular. Examiners should

expect management to have the experience, knowledge, and abilities to discharge its duties; to understand the nature and extent of the risks presented by securitization activities; and to develop the policies and procedures necessary to implement an effective risk management system to control such risks.

Outside parties are often used to develop a valuation model. As noted in the Residual Interest Valuation and Modeling chapter, banks often purchase or contract out the creation of a valuation model but management may not fully understand the model's design. A bank may have good models, but if users do not understand how to use them completely, the resultant values produced by the model may be flawed. Conversely, if the acquired model contains material structural flaw, and if management does not fully understand its design, it may not be able to identify these flaws and again could be producing and reporting inaccurate residual interest values. In addition, outside parties may be used to assist with determining the key assumptions used in the valuation model. Examiners should expect management to have provided outside parties with all the necessary data to derive assumptions and to understand and assess the reasonableness of any assumptions provided by outside parties. Management should be able to clearly demonstrate to the examiners its due diligence process for both selecting the appropriate third-party to assist in the valuation process and assuring that the resultant models, their assumptions, and output are reasonable and reliable.

Outside parties are also often used to perform the validation and audit of the residual interest valuation process. Validation and audit are two distinct processes. Validation refers to the process by which a person or persons independent of the valuation process validates the integrity of the model construction and its assumptions. Internal review or audit is the process by which a person or persons reviews the valuation procedures and processes to ensure that the person doing the validation is in fact independent, the validation scope is sufficiently detailed to ensure a suitable validation process is achieved, and that the validation is occurring at appropriate times and intervals. The person or persons conducting the validation should not be the same person or persons completing the internal review or audit. This concept is consistent with concepts contained in the *Interagency Policy Statement on the Internal Audit Function and Its Outsourcing*.

If the bank has outsourced other core functions such as marketing, underwriting, and servicing of the underlying receivables, examiners should determine if management has performed and provided for appropriate due diligence of the third-parties and oversight of their activities. Even if the receivables solicited, underwritten, and serviced by a third-party, such as in a Rent-a-Bin arrangement, are sold into a securitization vehicle, the bank remains as the owner of the account and continues to be exposed to significant risks that may be exacerbated by inappropriate actions of the third party. The Risk Management Examination Manual for Credit Card Activities contains several discussions on third-party arrangements in a general chapter on third parties and in its Credit Card Issuing Rent-a-BIN, Merchant Processing, and Third Party Relationships chapters. If the bank has used outside parties for certain securitization-related functions, examiners should refer to that manual.

## Internal Audit Function or Internal Review

Examiners should obtain and review the qualifications of the internal audit staff or those responsible for the independent review function and the most recent internal audit or review findings to determine if the staff is qualified to review securitization activities, if the review is adequate in scope, and if the findings are significant. During the examination process, examiners should determine if:

- The audit staff is independent from the decision making and daily operating processes.
- The internal audit program consists of periodic reviews of securitization activities, including transaction testing and verification.
- Findings are reported to the board or appropriate board committee.

- Principal audit targets include compliance with securitization policies, operating and accounting procedures, and series' covenants, as well as the accuracy of information systems and reports.
- The audit function confirms that the institution's regulatory reporting process is designed and managed in such a way as to facilitate timely and accurate report filing.
- Appropriate tracking and follow-up procedures of audit findings are established.

Furthermore, when a third party services the receivables, examiners should determine if the auditors perform an independent verification to ensure receivable balances reconcile to internal records. If management has not provided for such verification, examiners should contact the regional office to determine if it is prudent to complete their own testing of the third-party's records.

If recent internal audits or reviews are insufficient in scope or present critical findings, examiners should consider expanding their review of the areas that were not sufficiently addressed in the scope or where deficiencies are presented. For identified deficiencies, examiners should determine how and why the deficiencies occurred, any actions management has taken or plans to take in response to the findings, and the impact the deficiencies may have on the bank's financial condition or management assessment.

## Regulatory Reporting

The securitization and subsequent removal of assets from an institution's balance sheet requires additional reporting as part of the regulatory reporting process. An institution's directors and senior management are responsible for the accuracy of its regulatory reports. Because of the complexities associated with securitization accounting and risk-based capital treatment, examiners should determine if personnel who prepare these reports have the prerequisite knowledge of reporting rules and associated interpretations.

Regulatory agencies have revised and expanded the information collected in the Reports of Condition and Income (Call Reports) to facilitate a more effective analysis of the impact of securitization and asset sale activities on bank credit exposures. For banks engaged in securitization activities, examiners should pay particular attention to the following schedules: *Schedule RC-S - Servicing, Securitization, and Asset Sale Activities*; *Schedule RC-R – Risk-Based Capital*; *Schedule RC-I – Report of Income*; *Schedule RC-F – Other Assets*, and *Schedule RC-L – Off Balance Sheet Items*.

*Schedule RC-S* should be completed on a fully consolidated basis. *Schedule RC-S* includes information on assets that have been securitized or sold and are not reportable on the balance sheet of the Report of Condition, except for certain on-balance-sheet retained interest-only strips, subordinated securities and other enhancements, and seller's interests, which are included in *Schedule RC-S*. Examiners should refer to the Call Report instructions for these respective schedules as well as its glossary for specific instructions and information.

## Market Discipline and Disclosures

Transparency through public disclosure is crucial to effective market discipline and can reinforce supervisory efforts to promote high standards in risk management. FAS 140 sets forth required disclosures, and Appendix C to FAS 140 provides specific examples that illustrate the required disclosures. Well-informed investors, depositors, creditors and other counterparties can provide a bank with strong incentives to maintain sound risk management systems and internal controls. Adequate disclosure allows market participants to better understand the financial condition of the institution and apply market discipline, creating incentives to reduce inappropriate risk taking or inadequate risk management practices.

Paragraph 17 of FAS 140 details the disclosure requirements. For purposes of this manual, the focus is specifically on paragraphs 17 (h) and (i) of FAS 140, as amended, which pertain to securitizations that are accounted for as sales and in which the transferor (bank) has a continuing involvement in the transaction, respectively. Examiners should refer to the pronouncement for the exact language for each requirement. Briefly, these sections of Paragraph 17 require the following minimum disclosures:

- Accounting policies and methodologies used in determining the fair value for the initial and subsequent measurement and valuations of interests that continue to be held by the transferor and the methodologies used to determine their fair value.
- A description of its continuing involvement with the transferred assets, such as servicing, recourse arrangements, and restrictions on interests that continue to be held.
- Any related gain or loss recorded on the transaction.
- A discussion of the key assumptions used to measure the initial and subsequent fair values of any interests that continue to be held by the transferor. These disclosures should include, at a minimum, information about discount rates, expected weighted average life of the underlying receivables (a function of the expected principal payment rate), and anticipated credit losses.
- A discussion of cash flows between the transferor (bank) and the securitization vehicle, including proceeds from new securitizations, principal collections that have been re-invested in the revolving securitization, any delinquent receivables that the securitization vehicle has put back to and have been repurchased by the transferor, servicing fees, and cash flows on interests that continue to be held by the transferor.
- For all managed assets (both on and off-balance sheet receivables), the risk characteristics of the underlying securitized receivables, including delinquencies at the end of the reporting period, net credit losses during the reporting period, and the principal amount of securitized receivables outstanding at the end of the reporting period that has been derecognized (reported as sold) and the portion that continues to be recognized on the transferor's balance sheet.
- Sensitivity analysis or stress testing conducted by the institution showing the effect on the fair value of the interests the transferor continues to hold of two or more unfavorable changes in each of the key assumptions and a description of the sensitivity analysis or stress test methodology, objectives, and limitations.

Paragraph 17 also addresses disclosure requirements for servicing assets and liabilities. FAS 156, which was issued in March 2006, amended certain provisions of FAS 140, one of which is the disclosure requirements for servicing assets and liabilities. FAS 156, which, among other things, gives banks the option of either subsequently measuring each class of servicing assets and/or liabilities at fair value or at amortized cost, the following disclosure requirements will apply:

- Management's basis for determining the bank's classes of servicing assets and liabilities.
- A description of the risks inherent in servicing assets and liabilities and a description of any instruments used to mitigate the income statement effect of changes in fair value of the servicing assets and liabilities.
- The amount of contractually specified servicing fees, ancillary fees, or late fees earned during the reporting period, including a description of where these fees are reported on the income statement.
- *For classes of servicing assets and liabilities subsequently measured at fair value*, the activity in each class of servicing assets and liabilities during the reporting period and a description of where changes in the fair value are reported in the income statement, including beginning and ending balances, additions, disposals, changes in fair value resulting from changes in valuation inputs or assumptions used in the valuation models and from other reasons, and any other changes affecting the balance. The disclosure should also include a description of the valuation techniques used to estimate the fair values. Specific examples of what should be included in the descriptions are provided in the actual pronouncement.

- *For classes of servicing assets and liabilities subsequently amortized and assessed for impairment, the activity in each class or servicing assets and liabilities during the reporting period and a description of where changes in the carrying amount are reported in the income statement, including beginning and ending balances, additions, disposals, amortization, application of valuation allowance, other than temporary impairments, and any other changes affecting the balance and a description of those changes. The disclosure should also include the fair value of the servicing assets and liabilities at the beginning and end of the period, if practicable to estimate, and the description of the valuation techniques used to estimate the fair value. It should also include the risk characteristics of the underlying financial assets and the activity in any valuation allowance for impairment of recognized servicing assets.*

## REPORT OF EXAMINATION CONSIDERATIONS

The effects securitizations have on the bank's overall financial condition need to be considered when assigning CAMELS ratings and preparing the Report of Examination. The Risk Management Examination Manual for Credit Card Activities provides discussion on the various CAMELS components when a bank is engaged in credit card lending. When examining banks that engage in credit card securitizations, examiners should also consider some of the unique implications that securitizations have on the bank's risk profile.

### Capital

Capital should be assessed in light of asset quality and balance sheet composition. A significant concentration in higher-risk residual interest and the quality of the on-book receivables impacts both capital and asset quality.

In addition to the standard capital measurements and criteria assessed, examiners should also consider the book value of residual interests to equity capital when assessing the quality of capital. As noted throughout this manual, securitizations allow banks to leverage capital and generate profits that are contingent on future cash flows. An important component of this assessment is the amount of equity capital that supports higher-risk, more volatile residual interests. If, for example, residual interests represent a significant percentage of equity capital, the bank inherently presents greater risk to the deposit insurance fund. This inherent risk, however, may be mitigated by sound and effective risk management practices, such as prudent account solicitation, underwriting, and collection practices; conservative valuations of the residual interests; sound liquidity and contingency funding policies; and effective independent review and validation practices.

In addition, since a bank that securitizes and retains residual interests in the sold loans typically bears the first risk of loss, and commonly all the loss exposure, on the sold assets barring a catastrophic event, examiners should consider assessing the ability of equity capital to meet the credit risk contained in managed assets (managed asset exposure) by reviewing equity capital to managed assets ratios. When calculating this ratio, examiners should reduce the equity capital number by the amount of the CE IO strip, since if the assets were still on the banks books, the bank would not have been able to record this future income in capital. This analysis is similar to that performed by the rating agencies when monitoring the performance of companies that have significant involvement in the securitization market. Furthermore, for banks that have a heavy reliance on securitizations funding concentration issues may impact the examiner's assessment of capital. If the bank is unable or unwilling to access securitization-based funding, it may have to fund the receivables on balance sheet, which, if significant in volume, could cause a material reduction in the leverage capital ratio.

While the risk-based capital rules, which are discussed in the Regulatory Capital Chapter, incorporate the inherent risk and volatility of residual interests and attempt to quantify this risk in the risk-based capital measurements, the leverage ratio is not adjusted for this elevated risk. In

the event of a possible bank failure and subsequent receivership, it is the amount of equity capital, as measured by the leverage ratio, which impacts the loss to the deposit insurance fund. As a result, while the risk-based capital ratios are very telling about the risk present as a result of securitization activities, the composition and quality of capital as viewed through the leverage ratio and residual interests to equity capital ratio are also important considerations when assessing capital, especially when examining a problem bank.

## Asset Quality

On-book receivables are normally listed for adverse classification in accordance with the Uniform Retail Credit Classification and Account Management Policy, and sometimes even more broadly if the credit risk presented by the receivables so warrants, as noted in the Risk Management Examination Manual for Credit Card Activities. Examiners should also assess the residual interests for potential adverse classification.

Regardless of where the residual assets are held on the balance sheet, the examiners should consider the *Uniform Agreement on the Classification of Assets and Appraisal of Securities Held by Banks and Thrifts* (FIL-70-2004) (Uniform Agreement) when determining whether or not the residual interests should be adversely classified. The Uniform Agreement, however, does provide flexibility, and examiners may assign a more or less severe classification (or decide not to classify) when justified based on applicable facts and circumstances. In addition, not all residual interests are rated, so examiners will need to make an assessment about whether or not the non-rated residual interest would have received a sub-investment grade rating or presents characteristics of sub-investment quality. The following example illustrates one possible way of assessing non-rated residual interests. If, for example, the bank holds a non-rated subordinated bond from a particular series and the next senior bond in that series was rated BBB or BB, it may be reasonable to assume that the more junior non-rated bond would have received a sub-investment grade rating as well and, thus, warrants adverse classification.

Management may disagree with the aforementioned approach. A possible counter view could be that if, for example, the next senior bond in the series was rated BBB, the un-rated bond would have been rated a BBB- rather than BB. If management presents this counter view, examiners should consider any documentation provided by management to support this view and determine if it is reasonable. The most significant considerations should be any credit enhancement supporting the un-rated piece, the performance of the underlying receivables (which would translate into the value of the CE IO strip; a likely credit enhancement for the un-rated bond), and the remaining time to maturity. The remaining time to maturity could present a complicated issue. For example, if a bank holds a basic corporate bond that has a sub-investment grade rating but at the time of the examination there are only one or two months before it matures, examiners *may* choose not to adversely classify the bond if management can demonstrate that it is highly likely the bank will be repaid in full at maturity and the bank has no intention of purchasing a similarly-rated bond from the same corporation. With revolving credit card securitizations, an examiner may not reach this same conclusion. For example, even if there is only one or two months before an un-rated, presumably sub-investment grade bond matures, management may intend to issue a new series out of the master trust as a result of the maturing series. Thus, the current bond on the books would likely be replaced by another bond issued under the new series secured by the same receivables. However, what is not known is under what conditions the new bond will be issued (credit-enhancements, term, price, etc.). Again, it is up to examiners to use judgment when determining whether or not assets warrant adverse classification. Regardless of whether or not the assets are adversely classified, their risk characteristics must be considered in the assessment of asset quality.

Determining adverse classification of other residual interests, particularly the CE IO strip, cash collateral account, and spread account, is less straight forward. Typically the CE IO strip absorbs the first credit losses, and is therefore the most subordinated residual interest, and serves as a credit enhancement to the investor certificates, including subordinated certificates held by the

bank. Continuing with the example, if the CE IO strip serves as a credit enhancement for the bank's non-rated subordinated bond that is considered to be the credit equivalent of sub-investment quality, then it is logical to assume that the CE IO strip should also be considered sub-investment quality and listed for adverse classification accordingly. Similar logic could be applied to other residual interests, such as CCAs and spread accounts, if the securitization documents specify that these assets are also credit enhancements for the non-rated subordinated bond.

Not all securitizations are the same so examiners should not automatically assume that a CCA or a spread account serves as a credit enhancement for all investor certificates. For example, some securitizations are structured so that the CCA and/or spread account serves as a credit enhancement for only certain bond classes, such as the Class A and B bond holders but not the Class C holders. These accounts may still warrant adverse classification, but a different type of analysis would be necessary to determine if such a designation is warranted. While the most common risk characteristic is credit quality, the value of the CE IO strip is also impacted by payment rates. The Uniform Agreement suggests that adverse classification for reasons other than credit risk is possible; therefore, in addition to the credit risk present in the CE IO strip, the risk of a possible decline in the value of the CE IO strip due to higher principal payments may also be present.

Management may challenge the notion of adversely classifying cash, such as when a cash collateral account is held on deposit at the bank or the funds are invested in short-term liquid assets. In this situation, the first assessment should be to make sure that the cash collateral account is appropriately identified as a residual interest and that related Call Report and risk-based capital guidance is followed. The second assessment is to determine the asset's credit risk or the likelihood that the bank will be entitled to the full fair value of the cash held in the cash collateral account. Again, despite the fact that the cash collateral account, if held at the bank, is cash, it is restricted cash that exists for the benefit of the investor certificate holders. This asset needs to be assessed based on its nature, not simply its name. Continuing with the example, the securitization documentation may state that the CE IO strip absorbs the first loss and that if there is a shortfall in the excess spread for any given month or months, then the short fall comes out of the cash collateral account. In this scenario, if the retained subordinated bond is considered sub-investment quality based on its stated or implied rating, then again it is reasonable to assume that the cash collateral account also demonstrates sub-investment quality characteristics since it serves as a credit enhancement to that bond and it may warrant adverse classification. These interpretations of the Uniform Agreement are not hard and fast rules, and examiners should use their judgment and the flexibility allowed by the Uniform Agreement to ensure an accurate representation of the bank's asset quality is put forward.

Since the bank, through its residual interest holdings, typically bears all the credit losses on the sold receivables, in addition to standard adversely classified assets ratios and analysis, examiners could also consider assessing asset quality using managed data. Such data could include managed charge-off ratios, managed delinquency ratios, and managed cardholder quality indicators, such as average FICO score on the managed portfolio and/or percentage of cardholder balances with FICO scores below a certain threshold. Examiners may also want to consider applying the retail classification criteria to the managed receivables and view these as a percentage of Tier One capital (less the CE IO strip) as another way to assess the bank's credit risk. While it may not be necessary to present this data in the asset quality ratio page, it could be used to support examiners' conclusions about the asset quality rating, particularly in cases when there is some concern expressed by either the bank or regulators about the reasonableness of adversely classifying certain residual interests using the Uniform Agreement approach noted previously.

Leveraging afforded by securitizations creates the potential for the bank to outgrow control systems, potentially increasing credit risk. A sound credit culture instilled throughout the organization and controlled growth are keys to mitigating credit-risk. In addition, enhancement requirements on securitizations provide an indication of the rating agencies' perception of credit risk in the underlying receivables. Higher enhancements and/or higher pricing spreads typically



indicate that the rating agencies and investment community perceive a higher degree of credit risk. Enhancement levels and pricing should be compared to others in the industry to gauge the degree of credit risk perceived by the rating agencies and potential investors.

An important concept to keep in mind is that securitizations do not reduce credit risk; they merely redistribute that risk. The key is to determine where the credit risk lies following the securitization of the receivables. Was the credit risk transferred to the investors, a third-party guarantor, or does it remain with the bank? In most cases, all but catastrophic credit risk remains with the bank; therefore, typically the bank retains the same degree of credit risk that it had if the receivables had not been sold. Examiners should assess both capital and asset quality with this in mind.

## Earnings

Financial institutions that securitize a significant volume of credit card receivables experience a significantly different earnings picture than traditional banks. In credit card securitizations, credit card receivables are taken off the bank's balance sheet while a residual income stream generated from the receivables continues to flow to the bank. Securitization changes the bank's income composition such that a securitizing bank typically reports a lower net interest margin (NIM), lower provisions for loan and lease loss (PLLL) expense, and higher fee income. The NIM is decreased as a result of lower balance sheet earnings assets and the PLLL is decreased by the amount which would previously have been reported if the credit card receivables that were securitized had remained on the books. Non-interest income is increased as a result of servicing income and the continued gain (typically) on loans sold recorded with each monthly transfer of receivables (during the revolving period) returned to the bank by the securitization trust after allocating all cash flows to the investors.

Income generated by securitization activities needs to be considered in the earnings assessment. The quality of earnings is influenced by securitizations since earnings are impacted by gain on sale accounting, periodic valuation adjustments on residual interests, and provision releases (negative provisions) at the time of the initial sales. Examiners should attempt to quantify the impact of these non-core earnings sources on reported earnings. The analyst and investment communities are increasingly wary of non-core earnings, which could impact access to, and the cost of, market-based funding.

Securitizations do not change the true operating performance of the credit card portfolio. Securitization accounting allows the bank to accelerate and record estimates of future cash flows that are dependent on the performance of the underlying receivables. Since this is an estimate, any inaccuracies or overly-optimistic assumptions will directly impact the CE IO strip valuation and thus the earnings assessment. When a bank is involved with securitizations, the profitability analysis should be looked at as if the assets remained on the bank's balance sheet or on a cash flow basis. The actual cash flow, whether the assets are sold or not, is roughly the same. Most credit card securitizers present financial statements on both a managed and owned basis. Typically, the income statement will reflect a column on a managed basis, a column reflecting the impact due to securitizations, and then an income statement on an owned basis. This type of presentation provides a good starting point for assessing a bank's earnings performance and how that performance is impacted as a result of securitizations. Supplemental earnings indices used to evaluate a bank with securitization activities include:

- *Return on Estimated Managed Assets* – This ratio measures the return on assets by adding all receivables securitized to the average assets and represents the overall profitability of the bank on a managed basis.
- *Average Cost of Securitization versus Average Balance Sheet Funding Cost* – This ratio measures the off-balance sheet funding cost in relation to the balance-sheet funding cost.
- *Excess Finance Charges to Securitized Assets* – This ratio measures the

profitability of the bank's securitized receivables after all obligations of the trust have been met.

- *Excess Finance Charges to Non-interest Income* – This ratio measures the amount of income from securitization activities in relation to total non-interest income.

Examiners need to consider all examination findings, including any identified overstatement in the valuation of residual interests, when assessing the impact securitizations have on the bank's earnings performance.

## Liquidity

Credit card securitizations are considered one of the most important financing innovations in the card industry's history, particularly for those entities where a majority of their business is credit card lending. Banks that securitize essentially transform a pool of credit card receivables into cash which is then typically used to fund more credit card receivables (versus being a funding source for other banking activities). Securitization can be an effective funding method. Given adequate planning and an efficient process, it can create a more liquid balance sheet as well as leverage origination capacity. However, it can also be a volatile source of funding and is closely tied to the asset quality of the securitized receivables. Certain structures as well as excessive reliance on a single funding vehicle may actually increase liquidity risk.

The liquidity assessment should include identifying exactly how reliant a bank is on securitizations for funding by reviewing securitizations as a percentage of managed credit card receivables. Although bank management should establish prudent limitations, regulators have not established a specific benchmark for determining concentrations. For example, in one bank securitizations funding 50 percent of managed receivables may be acceptable if performance is good and stable and sufficient alternatives exist, yet for another bank, securitizations funding 30 percent of managed assets may be problematic if the securitization is performing poorly (or has a higher volatility and thus potential for poor performance) and the bank has minimal or undesirable alternative funding. In addition, the advent of the de-linked structure gives securitizers greater funding flexibilities with securitizations. A bank may have securitized a pool of receivables but only sold the Class C certificates (typically the triple-B rated bonds) and retained the Class A and Class B. If funding needs increase, the bank could quickly and easily sell these higher investment grade certificates in the market place. Examiners need to assess each case individually to determine if a funding concentration exists and, if so, if the concentration presents heightened liquidity concerns. While comparing a bank's specific funding structure to others in the industry is encouraged and extremely useful, a bank that is an outlier does not necessarily mean it is problematic, but it certainly will require increased scrutiny to determine if effective controls or contingency plans are in place to mitigate the risk.

If examiners determine that a funding concentration exists in credit-sensitive securitizations, the bank may (or examiners may require that a bank) compensate for this concentration, particularly if funding a subprime portfolio, by retaining a sufficient amount of on-balance sheet funding or by having alternative funding sources already in place. The amount of on-balance sheet funding needed depends on the performance of the securitizations and anticipated funding needs. For example, if excess spreads are expected to decline due to deteriorating performance of the underlying receivables, examiners may suggest (or require depending on the circumstance) that management hold enough liquid assets on balance sheet to meet a certain time frame of funding requirements, such as three or six months or more. Funding requirements typically include maturing deposits, receivable growth, and maturing securitizations. On balance sheet funding should provide management with sufficient time to execute back-up liquidity plans, such as asset sales, new securitizations, access to borrowing facilities, and debt and/or equity issuances.

Considerations and risks associated with using securitization as a funding source include, but are not limited to:

- *Early amortization clauses* – Revolving credit card securitizations have early amortization clauses that are designed to protect investors if the performance of the receivables does not meet the specified criteria. If early amortization is triggered, the trustee will begin using the principal payments received from the cardholders (as collected and remitted by the servicer) to make principal payments to the bondholders earlier than originally scheduled. As a result, the trustee will not be using those principal payments to purchase new receivables (new charges on the accounts) from the bank, and the bank will have to fund these new receivables on its balance sheet. Bank management must monitor deal performance in order to anticipate cash flow and funding ramifications due to early amortization clauses. While the trustee can seek a waiver of an early amortization, there is no guarantee that such a waiver would be granted, and those types of waivers usually require the bank to provide compensation which could be quite costly.
- *Limitations of residual assets* - If the bank has a concentration of residual interests to capital, its overall cash flow might be dependent on the residual cash flows from the performance of the underlying receivables. If that performance is worse than projected, the bank's overall cash flow will be less than anticipated. In addition, residual assets that the bank retains typically do not have an active market and are not acceptable collateral to pledge for borrowings. Thus, they are essentially illiquid. Furthermore, if the bank has established (or the regulators have required) a limit on the volume of residual assets and the bank is near or at that limit, it may not be able to complete any new (increase) securitizations. If a bank is in a growth mode, this situation could present a funding issue.
- *Marketplace reputation* - A bank's marketplace reputation is crucial to its ability to generate cash from future securitizations. If this reputation is damaged, the bank might not be able to economically securitize assets and generate cash from future sales of credit card receivables to the trust. This is especially true for banks that are relatively new to the securitization market. Also, if the loans held-for-sale are funded with short-term funding, the bank will have to find alternative funding sources if it is not able to sell the receivables quickly.
- *Investor demands* - Card portfolios comprised of higher-risk assets or that reflect unusual volatility can be difficult to securitize and/or sell. For example, investors often quickly lose their appetite for risk in an economic downturn or when financial markets become volatile. Further, developments such as a rise in delinquencies or charge-offs could have significant implications. For example, the securitization of assets whose performance has deteriorated may result in a negative market reaction that could increase the spreads on a bank's subsequent issues. Or, similar deterioration may result in the bank having to increase enhancements (such as a spread account). In all, a bank can sell and operate in the asset-backed market at a reasonable cost only if it is able to meet investors' demands.
- *Time to implement* - A first-time securitization deal may take a few months (and sometimes longer) to complete. Subsequent deals are usually processed quicker, and in some instances may take less than a month. Nonetheless, securitization still takes time to complete and that timing should be factored into the bank's liquidity plans. Other credit facilities or funding sources (such as a warehouse facility) are usually needed to provide flexibility during deal negotiations.
- *Capital allocation* - Banks originating credit card receivables specifically for securitization sometimes depend too much on securitization markets to absorb new ABS issues and might only allocate just enough capital to support a flow of assets to the securitization market. This strategy could cause funding difficulties if circumstances were to force the bank to hold assets on its books.

There are a variety of ways for management to mitigate some of the risks associated with credit card securitizations. One way is to correlate maturities of securitizations with overall planned

balance sheet growth. Management should also have adequate monitoring systems in place to alert it well in advance of an approaching trigger. This advance warning mechanism allows management time to consider preventative actions as well as factor the maturity and potential funding needs of the receivables into shorter-term liquidity planning. Liquidity implications of securitizations should be considered in a bank's day-to-day liquidity management and the contingency funding plan. Each contemplated securitization should be analyzed for its impact on liquidity both as an individual transaction and as it affects the aggregate funds position.

### Sensitivity to Market Risk

In addition to traditional interest rate risk assessments performed on the on-balance sheet assets and liabilities, examiners should expect that institutions that securitize and retain an interest in the securitized pool of receivables complete assessments of the impact changing market interest rates have on the excess spread generated by the transferred receivables and fair value of the residual assets. Securitization of credit card receivables can pose interest rate risk even though the receivables are sold. Investor coupon rates tied to an index different than the underlying assets results in basis risk within a series, which can adversely affect future income. Different pricing intervals on the credit card receivables and the coupon rate paid on the investor certificates can have the same effect.

Pricing and basis risk are present in every securitized portfolio of credit card receivables and those risks must be prudently managed to minimize their impact on prospective earnings. A poorly structured issue will affect the amount of excess spread returned to the bank. A high degree of interest rate risk within a securitized pool of receivables can also result in an early amortization event and cause liquidity and capital concerns. For example, if a pool of receivables that are predominately fixed-rate support variable-rate investor certificates issued in a securitization, in a rising interest rate environment, the excess spread will likely decline, perhaps to the point of triggering an early amortization event. This scenario, however, is less likely today than in the past when credit card issuers offered more fixed-rate products. Today, banks that securitize credit card receivables do so with the intent of matching the timing and pricing structure of the underlying receivables with the coupon paid on the investor certificates. However, with the popular use of variable-rate pricing on receivables comes the risk of increased charge-offs in a rising interest rate environment, particularly for subprime issuers who have a higher percentage of cardholders making only the minimum payment. The risk in this situation is that the charge off rate increases at a faster pace than the corresponding increase in the yield. The opposite situation is true as well; in a declining rate environment, the risk is that the decline in the yield is faster than the actual decline in the charge-off rate. This situation is not isolated to changing market interest rates, but can also occur do to changing underwriting practices (either taking on more credit risk or reducing credit risk).

Depending on the interest rate environment and pricing structure of the underlying receivables, examiners should determine if the bank's sensitivity analysis used to assess the vulnerability of the excess spread to changing market interest rates incorporates either explicit or implied floors or ceilings and any other **hedging instruments**. For example, many banks will not price cards over a certain threshold, even those banks with risk-based pricing structures (**universal default rates**), even if not expressly prohibited by the terms of the cardholder agreement. In these banks, there may be situations where cardholders are already paying a rate at or near an implied ceiling, and, as such, when the bank completes its sensitivity analysis (for example, assumes rate increase 100 or 200 basis points) it should be capturing this implied ceiling in its sensitivity analysis.

Residual assets from credit card securitization activities are sometimes sizeable components of the bank's balance sheet. In addition to the impact market interest rates have on the excess spread (monthly excess cash flow component of the discounted cash flow valuation technique commonly applied to valuing the CE IO strip), interest rates are important inputs in determining discount rates for valuing the residual assets, and changes in the assumed rate could

substantially affect the carrying values. Examiners should review how the bank determines the sensitivity of the fair value of the residual interests to assumed changes in the discount rates.

Most asset liability managers attempt to minimize interest rate risk in their securitization activities by procuring financial derivative instruments, such as, interest rate swaps, basis swaps, caps, or floors as part of the securitization structure. The trust's use of financial derivatives must be specifically permitted by the pooling and servicing agreement (or other securitization documents) and, when used, are generally obtained at the inception of the transaction. The rating agencies will analyze the type of instruments, the strength of the counterparties, and will consider the affect of the financial derivatives when assigning a rating to the certificates in each series.

Examiners should identify and evaluate the presence of any basis or repricing risk and review the securitization documents to determine if financial derivatives are allowed. If the bank uses financial derivatives to minimize interest rate risk in the securitization, examiners should assess these derivatives to determine if management performed appropriate due diligence prior to entering into the arrangement (counterparty risk, etc.), if the derivatives are mitigating the risk as intended, and if they are properly accounted for under current accounting rules. The transaction must be accounted for properly and reviewed against FAS 140, FAS 133, *Accounting for Derivative Instruments and Hedging Activities*, and FAS 155 *Accounting for Certain Hybrid Financial Instruments – An Amendment of FASB Statements No. 133 and 140* criteria. Any significant concerns should be addressed with management and appropriately commented on in the Report of Examination.

---

## XI GLOSSARY

---

<i>Adequate Compensation</i> <sup>42</sup>	The amount of benefits of servicing that would fairly compensate a substitute servicer should one be required, which includes the profit that would be demanded in the marketplace.
<i>Account Additions</i>	Accounts that are added to (technically, designated for) the securitization vehicle in order to maintain the investor's interest in the underlying assets at the prescribed level, establish new series within a <i>master trust</i> , or change the existing credit quality on the aggregate pool of receivables.
<i>Accumulation Period</i>	See definition for Controlled Accumulation Period.
<i>All-in-Funding Cost</i>	All costs, such as transaction cost, equity, and debt.
<i>Attached Call</i> *	A call option held by the transferor (bank) of a financial asset that becomes part of and is traded with the underlying instrument. An attached call held by the transferor could result in the transferor retaining effective control, and its existence could preclude sales treatment on the transaction.
<i>Attrition</i>	The loss of accounts either involuntarily through charge-off or death; or voluntarily, at the option of the cardholder.
<i>Amortization Period</i>	See definition for Controlled Amortization Period.
<i>Base Rate</i>	The sum of the coupon rate paid on the investor certificates and the servicing fee.
<i>Beneficial Interest</i> *	Rights to receive all or portions of specified cash inflows to a trust or other entity, including senior and subordinated shares of interest, principal, or other cash inflows to be "passed-through" or "paid-through," premiums due to guarantors, commercial paper obligations, and residual interests, whether in the form of debt or equity.
<i>Bank Identification Number (BIN)</i>	A series of numbers assigned by Visa to its member financial institutions to identify each institution for acquiring and issuing processes. The term ICA is used by MasterCard and is similar to a BIN. VISA BINs start with 4, and MasterCard ICAs start with 5.

---

<sup>42</sup> The terms identified with an asterisk (\*) were obtained from the definitions provided in Appendix E to FAS No. 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishment of Liabilities*.

<i>Bullet Payment</i>	A single principal payment made on the certificates when the series matures.
<i>Cash Collateral Account</i>	A segregated account established by the securitization trust, funded at the time a series is issued, that can be used to cover interest and/or principal on the investor certificates and other trust expenses (such as servicing expense) when the excess spread falls below zero.
<i>Cash Flow Waterfall</i>	Required, orderly cash flow allocations as specified in the pooling and servicing agreement.
<i>Cherry Picking</i>	The propensity to select credit card receivables of higher or the highest quality for the purpose of securitization in order to improve the performance of the securitization. The resultant risk is that the bank may retain the riskier receivables on its balance sheet.
<i>Clean-up Call*</i>	An option held by the servicer or its affiliate, which may be the transferor, to purchase the remaining transferred financial assets, or the remaining beneficial interests not held by the transferor, its affiliate, or its agents in a securitization vehicle (or in a series of beneficial interests in transferred assets within a securitization vehicle), if the amount of outstanding assets or beneficial interests falls to a level at which the cost of servicing those assets or beneficial interests becomes burdensome in relation to the benefits of servicing.
<i>Collateral Invested Amount (CIA)</i>	Un-certificated, privately-placed ownership interest in the securitization trust, subordinate in payment rights to all investor certificate holders.
<i>Contractual Servicing Fee</i>	The fee paid to the servicer in accordance with the terms and conditions of the pooling and servicing agreement.
<i>Controlled Accumulation Period</i>	The period during which principal payments made by the cardholders and collected by the securitization trust are deposited into a principal funding account and reinvested for a specific period of time. The funds are distributed to the investors as a bullet payment when the certificates (bonds) mature.
<i>Controlled Amortization Period</i>	The period subsequent to the revolving period in which an even distribution of principal payments is made to the investor certificate holders (versus a controlled accumulation period).
<i>Credit Enhancements</i>	Various internal and external facilities designed to reduce the credit risk to the investors with the goals of achieving higher ratings on and improving the marketability of investor certificates.

---

<i>Credit-Enhancing Interest-Only Strip (CE IO Strip)</i>	An on-balance sheet asset that, in form or in substance, (1) represents the contractual right to receive some or all of the interest due on the transferred assets; and (2) exposes the bank to credit risk that exceeds its pro-rata share claim on the underlying assets whether through subordination provisions or other credit-enhancing techniques.
<i>Direct Reduction Method</i>	For risk-based capital calculations, a bank includes an institution-specific amount in its risk-weighted assets for its maximum contractual dollar amount of exposure that is calculated using the actual amount of the bank's total risk-based capital.
<i>Designated Accounts</i>	Credit card accounts corresponding to securitized loans versus credit card accounts held on book (sometimes referred to as trust accounts).
<i>Dilution</i>	A decline in credit card receivables due to charge reversals, such as merchandise returns, customer disputes, and fraudulent charges.
<i>Direct Credit Substitutes</i>	Direct credit substitutes arise from an arrangement in which a bank assumes, in form or in substance, credit risk associated with an on- or off-balance sheet asset or exposure that was not previously owned by the bank (that is, it was a third-party asset), and the risk assumed exceeds the pro-rata share of the bank's interest in the third-party asset. Examples of direct credit substitutes include purchasing a subordinated certificate of another bank's securitization, guaranteeing a mezzanine certificate of another bank's securitization, or providing a letter of credit to an asset-backed commercial paper program.
<i>Early Amortization</i>	An unplanned liquidation of the assets generally due to deterioration in the credit quality of the underlying receivables. Another term for "Wind Down Event."
<i>Econometric Models</i>	Forecasting models that assess the impact of the economy on the performance of a specific pool of assets.
<i>Embedded Call*</i>	A call option held by the certificate issuer of a financial instrument that is part of and trades with the underlying instrument. An embedded call is not held by the transferor (as is the case with an attached call) and as a result, embedded calls do not preclude sales treatment.
<i>Excess Finance Charges</i>	The difference between the gross yield on the pool of securitized receivables less the cost of financing those receivables (weighted average coupon paid on the investor certificates), charge-offs, servicing costs, and any other trust expenses (such as insurance premiums, if any). Excess finance charges are typically a source of credit enhancement for the certificates since they are



commonly available to absorb losses on the assets. As long as the excess finance charges are positive, the deal (securitization) is able to cover all its costs. The amount of excess finance charge is a measure of a securitization trust's profitability. Excess finance charges spread is also referred to as *Excess Spread*.

*Excess Spread*

The difference between the gross yield on the pool of securitized receivables less the cost of financing those receivables (weighted average coupon paid on the investor certificates), charge-offs, servicing costs, and any other trust expenses (such as insurance premiums, if any). Excess spread is typically a source of credit enhancement for the certificates since it is commonly available to absorb losses on the assets. As long as the excess spread is positive, the deal (securitization) is able to cover all its costs. Excess spread is a measure of a securitization trust's profitability. Excess spread is also referred to as Excess Finance Charges.

*Expected Final Payment Date*

The date the credit card issuing bank expects the final payment of principal and interest to be made on the certificates.

*Finance Charges*

The sum of cardholder interest charges, annual membership fees, cash advance fees, transaction fees, and any other fees charged or incurred by the cardholders in connection with their use of the credit cards.

*Forward Commitment*

A provision that requires an institution, for specified period of time, to provide replacement assets to the securitization vehicle as the originally transferred receivables are repaid. Typically these contracts are entered into at market rates; therefore, its value at the date of the securitization is zero.

*Gross-up Method*

For risk-based capital purposes a bank includes an amount in its risk-weighted assets for its maximum contractual dollar amount of exposure that is calculated under the assumption that the bank's total risk-based capital ratio equals eight percent.

*Hedging Instruments*

Any contract that effectively reduces an institution's exposure to the risk in changes in price or interest rates.

*Implicit Interest Rate Swap*

An implied component of a securitization transaction that occurs when the interest rate paid by cardholders, whether fixed or variable, differs from the basis paid to the investors.

*Implicit Recourse*

Implicit recourse arises from an institution providing post-sale, non-contractual support to either improve the credit quality or cash flow in a securitization series.

*Interchange Fees*

A fee paid by one bank to another to cover handling costs and credit risk in a card transaction. It is usually a

percentage of the transaction amount, which is typically set by the Associations. It is normally extracted from the merchant discount by the acquiring bank (in essence paid by the merchant) and paid to the separate issuing bank to compensate it between the time of settlement with the acquiring bank and the time of recouping value (payment) from the cardholder. The merchant typically bears this expense since it receives the payment for the purchase immediately while the issuing bank must wait until the cardholder is billed and makes payment (covers the float time allowed by the grace periods).

*Interest-Only Strips (IO Strips)*

The contractual right to receive some or all of the interest due on an interest-bearing financial asset. The IO strip may or may not provide credit support for the transferred assets. If it provides credit support, it is defined as a credit-enhancing (CE) IO strip for this manual.

*Liquidity Facility*

Funds cash flow shortfalls on ABCP when mismatches occur in the receipt of cash flow from the underlying assets and obligation to pay commercial paper investors, or when there is a disruption in the capital markets. Liquidity facilities are generally not associated with or used to compensate for credit risk or credit losses.

*Low-Level Exposure Rule*

Combined capital charges shall not exceed the face amount of a bank's residual interests.

*Master Trust*

A securitization trust that houses more than one securitization issue. The master trust structure is designed to provide flexibility and a cost-effective means of securitizing credit card receivables.

*Moral Recourse*

A term used when a bank is compelled to provide non-contractual credit and yield to support the securitization and protect its reputation in the marketplace.

*Pooling and Servicing Agreement*

A legal, valid, and binding contract between the securitization trustee, the selling bank, and the servicer, which includes specific terms, such as the maintenance of a minimum seller's interest, servicing requirements, reporting requirements, cash flow structures (priorities – also known as the cash flow waterfall), and the addition and removal of accounts.

*Principal Funding Account*

An account set up by the securitization trustee during the accumulation period for the purpose of investing these funds until the Pooling and Servicing Agreement requires principal payments to be made to the investors.

*Principal Receivables*

The portion of monies collected from cardholders representing principal payments. The term is synonymous with principal collections.

*Qualified Special Purpose*

<i>Entity (QSPE)</i>	<p>In a <b>two-step securitization</b> structure, the QSPE is the entity that issues the certificates (the second step). QSPE's are designed to operate with limited decision-making authority. Whether or not the securitization vehicle is a QSPE is very important for determining whether or not the assets and liabilities of the securitization vehicle should be consolidated. The goal is to avoid consolidation. In accordance with FAS 140, there are three qualifying conditions: 1) legal isolation, 2) the ability of the transferee to pledge or exchange the transferred assets, and 3) surrender effective control. QSPE is also referred to as securitization vehicle or trust in this manual.</p>
<i>Recourse</i>	<p>Recourse arises from an arrangement in which a bank retains, in form or in substance, the credit risk in connection with an asset sale in accordance with GAAP, if the credit risk exceeds a pro-rata share of the banks claim on the assets. Examples of recourse include off-balance sheet contractual agreements to repurchase assets, spread accounts, cash collateral accounts, retained subordinated certificates, and retained CE IO strips.</p>
<i>Reserve Accounts</i>	<p>An account established to ensure the distribution of principal and interest on the certificates.</p>
<i>Residual Interest</i>	<p>Residual interest refers to any on-balance sheet asset that represents an interest (including a beneficial interest) created by a transfer that qualifies as a sale (in accordance with GAAP) of financial assets, whether through a securitization or otherwise, and that exposes a bank to any credit risk directly or indirectly associated with the transferred asset that exceeds a pro-rata share of that bank's claim on the assets, whether through subordination provisions or other credit enhancement techniques. Residual interests do not include interests purchased from a third-party, except for CE IO strips.</p>
<i>Revolving Period</i>	<p>The period of time when the investors receive only interest payments on the certificates. During this period, all principal receivables collected and remitted to the securitization vehicle are used to purchase new credit card receivables from the bank, to pay down other issues in the master trust that are amortizing or in their accumulation period, or are distributed to the seller.</p>
<i>Roll-rate</i>	<p>The percentage of balances or accounts (units) that moves from one delinquency stage to the next delinquency stage. It measures the rate that accounts (units) or balances move (roll) to the next level of delinquency and are used in migration analysis.</p>
<i>Securitization*</i>	<p>The process by which financial assets are transformed into securities.</p>

---

<i>Seller*</i>	A transferor that relinquishes control over financial assets by transferring them to a transferee in exchange for consideration. The seller is typically the bank under examination and is also referred to as the transferor.
<i>Seller's Interest</i>	
<i>Senior/Subordinated Structure</i>	A structure that establishes two or more classes of ownership within a series. Sometimes this is referred to as tranching.
<i>Series Final Termination Date</i>	The legal date when principal and interest must be paid on the certificates.
<i>Servicing Assets*</i>	A contract to service financial assets under which the estimated future revenues from contractually specified servicing fees, late charges, and other ancillary revenues are expected to more than adequately compensate the servicer for performing servicing.
<i>Servicing Liabilities*</i>	A contract to service financial assets under which the estimated future revenues from contractually specified servicing fees, late charges, and other revenues are not expected to adequately compensate the servicer for performing the servicing.
<i>Socialized Trusts</i>	A type of trust where each series has an undivided interest in all of the receivables of the trust and where principal payments and finance charges collected are shared between all the series in the master trust.
<i>Special Purpose Entity</i>	Any vehicle that places the transferred assets presumptively beyond the reach of the transferor (e.g. legally isolated).
<i>Spread Accounts</i>	In a securitization, the governing documents may require that if specific performance indicators fall below certain thresholds, any excess spread will be "trapped" into an account for the benefit of the certificate holders as a form of credit enhancement against future credit losses. The performance indicators are usually based on the performance of the underlying receivables, rating agencies actions, or excess spread falling below a specified threshold.
<i>Stand Alone Trust</i>	A securitization trust that houses only one securitization issue. At the termination of the issue, the trust is dissolved.
<i>Static Cash Flow Model</i>	Estimating future cash inflows and outflows based on a static environment (point-in-time estimates) and then discounting these using an appropriate discount rate to determine the value of an asset.

<i>Structural Termination Triggers</i>	Triggers established as part of an ABCP issuance aimed at protecting investors from a deteriorating pool of credit card receivables and their corresponding losses.
<i>Subprime</i>	Exhibiting characteristics that indicate a significantly higher risk of default than traditional bank lending customers. Risk of default may be measured by traditional credit risk measures (credit history, debt to income levels, and so forth) or by alternative measures such as credit score.
<i>Surety Bonds</i>	Guarantees issued by third parties, usually a triple-A rated, mono-line insurance company. Surety bond providers guarantee the payment of interest and principal to specified investor certificate holders. The cost of this guarantee is a component of the trust expenses and is taken out of the cash flow generated by the underlying receivables (a component of the excess spread calculation).
<i>Transferee*</i>	An entity that receives a financial asset, a portion of a financial asset, or a group of financial assets.
<i>Transferor*</i>	An entity that transfers a financial asset, a portion of a financial asset, or a group of financial assets that it controls to another entity.
<i>Two-Step Securitization</i>	Two transfers are generally used in a securitization to isolate the transferred receivables beyond the reach of its creditors. The first step involves the transfer of the assets to a special purpose entity or corporation (often referred to as the depositor) that is wholly-owned by the selling bank. This step essentially isolates the assets from the transferor (bank) and its creditors and is typically deemed a true sale for legal and accounting purposes. The second step involves transferring the assets to a QSPE trust. This second transfer is done with the SPV (depositor) providing sufficient credit and yield enhancements so the QSPE trust can issue higher-rated investor certificates. <sup>43</sup>
<i>Universal Default</i>	When a lender changes the terms of a loan from the original terms to the default terms when the lender is informed that their borrower has defaulted with another lender.
<i>Variable-Interest Entities</i>	Refers to an entity subject to consolidation according to the provisions of FASB Interpretation No. 46. Variable interests in variable interest entities are contractually, ownership, or other pecuniary interests in an entity that changes with changes in the fair value of the entity's net assets exclusive of variable interests. <sup>44</sup>

---

<sup>43</sup> See Deloitte & Touche, LLP, "Securitization Accounting: The Ins and Outs (And Some Do's and Don'ts) of FASB 140, FIN 46R, IAS 39, and More...", June 2005 edition.

<sup>44</sup> See FASB Interpretation No. 46, "Consolidation of Variable Interest Entities." Paragraphs 2 a. and 2 c.