

行政院及所屬各機關出國報告

(出國類別：實習)

美國監理機關對銀行金融資產證券化之監理

服務機關：中央銀行

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出國地區：美國

出國期間：90年6月16日至7月15日

報告日期：90年9月

21 / 009003620

系統識別號 C09003620

公務出國報告提要

頁數 44 含附件: 否

報告名稱:

美國監理機關對銀行金融資產證券化之監理

主辦機關:

中央銀行

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出國類別: 實習

出國地區: 美國

出國期間: 民國 90 年 06 月 16 日 - 民國 90 年 07 月 15 日

報告日期: 民國 90 年 09 月 10 日

分類號/目: D1/金融 D1/金融

關鍵詞: 資產證券化, 金融監理

內容摘要: 此次奉派至美國研習該國監理機關對銀行金融資產證券化之監理，為期三十天，期間拜會各監理機關及國際性商業銀行總行，實際瞭解其從事資產證券化業務之各項議題，並參加由儲貸機構監理局舉辦之「資產證券化」課程，對瞭解該國資產證券化之發展背景、現況與展望，監理機關對銀行資產證券化監理，以及擴大國際金融視野，收穫良多。銀行金融資產證券化，除可降低銀行資產負債管理的風險，增加資產流動性外，並能增加資金運用效率，提高自有資本對風險性資產的比率。另外可藉資產證券化過程中之貸款保險、支付保證等措施，引入保險公司或仲介機構，加強對銀行授信品質的監督。謹就本次研習所得，研提下列意見以供參考：(一)特殊目的機構為資產證券化成敗之關鍵，宜訂定特別規範以隔絕發行機構之破產風險。(二)為增加市場接受性，可成立類似中小企業信保基金之機構，對符合其發行條件之資產抵押證券，保證其到期兌付。(三)建立標準化契約及歷史統計資料庫資料。(四)推廣信用評等觀念，積極改善債券市場缺失，擴大其規模，創造有利資產證券化發展之環境。(五)推動初期可先就公教人員住宅貸款來發展不動產證券化，待市場接受度成熟後，再依序發展金融資產及商業資產證券化。(六)本國銀行推動初期可先與國外專業機構合作，以獲得從事該業務之專門智識，並引進先進之管理資訊系統，作為日後發展資產證券化業務之基礎。(七)我國金融監理機關宜因應資產證券化業務之陸續推展，成立工作小組，針對資產證券化所衍生之各項議題，詳加研究分析，並對檢查人員實施完整之教育訓練。

本文電子檔已上傳至出國報告資訊網

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壹、前言

本人此次奉派至美國地區研習該國監理機構對銀行金融資產證券化之監理，為期三十天，期間於華盛頓特區（Washington D.C）拜會聯邦準備理事會（Board of Governors of the Federal Reserve System, FRB）、財政部金融局（Office of the Comptroller of the Currency, OCC）、聯邦存款保險公司（Federal Deposit Insurance Corporation, FDIC）、儲貸機構監理局（Office of Thrift Supervision, OTS）及政府全國抵押協會（Government National Mortgage Association, GNMA）等機構，於紐約市拜會紐約聯邦準備銀行（Federal Reserve Bank of New York）、紐約州政府銀行局（State of New York Banking Department）等監理機關，另拜訪花旗銀行（Citibank）及摩根大通銀行（J.P Morgan Chase Bank）總行，實際瞭解其從事資產證券化業務之各項議題。最後，在達拉斯（Dallas）參加由儲貸機構監理局舉辦之「資產證券化」課程。本次研習主題恰能符合當前金融環境所需，對瞭解美國資產證券化之發展背景、現況與展望，監理機關對銀行資產證券化監理，以及擴大國際金融視野，收穫良多。在此，特別感謝金檢處陳處長上程鼓勵我勇於接受此一任務，央行紐約代表辦事處孫主任全玉細心安排在美拜訪行程，金檢處資料科林科長銘寬行前之指導，使此次實習能順利完成。

隨著科技進步與財務工程（financial engineering）發展，該國銀行之金融商品不斷推陳出新，其所從事之資產證券化業務（Asset Securitization Business）亦不外例，不但結構日趨複雜且風險日益遞增。在安全與穩健經營原則下，如何加強以風險為基礎（Risk-based focus）之管理（即辨識、衡量、監理及控制風險），遂成為該國監理機關與銀行管理階層之重大挑戰。該國金融監理單

位對銀行相關資產證券化業務，有一套完整之書面說明與因應措施，舉凡對其整體營運之影響、風險管理、檢查目標與程序、內部控制與內部稽核、會計原則之適用、應揭露要項、管理資訊系統及報表稽核等，均可作為我國現行推動資產證券化業務，制訂相關法令規章之參考。

貳、資產證券化之基本架構

證券化為自 1930 年代以來，美國金融市場最重要且持續發展的創新產品之一，它改變了美國及世界金融之面貌。證券化使消費者借款需求能符合商業活動，取代了傳統金融仲介功能，並直接連結貨幣及資本市場。證券化之相關組織如貸款創始者、特殊目的機構、服務者、信用加強機構、本地及全球之投資者，正不斷取代傳統借貸市場貸放者、地方性儲貸機構及銀行之功能。今日美國市場已有近八成左右的住宅貸款被證券化，超過一半以上之汽車貸款及信用卡債權進行證券化，由此可看出其對美國市場的影響力。

證券化 (Securitization) 一詞，最早出現於 1977 年華爾街日報 (Wall Street Journal) 中之一篇「街頭聽聞」(Heard on the Street) 專欄文章中。證券化可定義為將個人貸款及其他債權資產加以組合 (package)，使其轉變為證券型態之過程，並加入信用增強機制或評等功能以出售給第三者之投資人。利用此一型態發行之證券通稱為資產擔保證券 (Asset-backed Securities, ABS)。

美國儲貸機構 (Saving and Loan Association, S&L) 建立於 1930 年代，由於適值經濟大蕭條，失業問題相當嚴重，許多人無力購買房屋，為解決此一問題，政府允許儲貸機構設立，以互助方式彼此周濟。長久以來，儲貸機構遍佈美國社會各個角落，成為一般民眾資金借貸場所，並有社區銀行 (Community Bank) 之美譽。由

於利率長期以來相當平穩，此種借貸方式尚能運行。但自 1970 年代開始，歐美先進國家推行金融自由化及國際化政策，利率及匯率開始大幅波動，而儲貸機構主要資金來源為短期存款，其資金運用為中、長期固定利率住宅抵押放款，如此資產負債期間不配合現象，在 1970 年代高利率時期便遭受重大損失。另一方面，因存款利率設有高限，無法充分反映市場利率之上漲，存款人紛紛將存款提出，儲貸機構面臨資金吸收困難及流動性不足，而導致經營發生危機。為協助解決其困境及振興住宅金融市場，乃由美國三大政府擔保機構（Government-Sponsored Enterprises, GSEs）：政府全國抵押協會、聯邦全國抵押協會（Federal National Mortgage Association, FNMA）及聯邦住宅貸款抵押公司（Federal Home Loan Mortgage Corporation, FHLMC）出面購買儲貸機構所承作之住宅貸款，匯集成組群（pooling）並加以保證，再發行證券銷售給投資大眾。儲貸機構藉此獲得可貸資金，流動性增強後，可再開發新的住宅放款。由於不動產抵押貸款證券（Mortgage-backed Securities, MBS）普遍為市場接受，到 1980 年代銀行逐漸將此觀念與技術運用到其他非住宅抵押貸款項目，如汽車貸款、信用卡應收債權、及應收貸款債權等，成為資產證券化之主要標的。

依據美國地區金融機構填報報表(Call Report)及非正式場外監控資料顯示，近年來美國境內銀行持有之不動產抵押貸款相關證券餘額大幅增加，另資產擔保證券及資產擔保商業本票整體市場流通餘額亦不斷擴增，相關資料統計如下（資料來源：紐約聯邦準備銀行）：

一、FDIC 保險之商業銀行持有之不動產抵押貸款相關證券餘額：

(Mortgage-Related Securities Holdings at FDIC-Insured Commercial Banks)

<u>年 底</u>	<u>持有 MRS 餘額 (十億美元)</u>
1995	329.03
1996	336.04
1997	384.14
1998	470.21
1999	454.47
2000	470.47

二、資產擔保證券整體市場流通餘額：

(Asset-Backed Securities Outstandings)

<u>年 底</u>	<u>ABS 流通餘額 (十億美元)</u>
1995	292
1996	388
1997	514
1998	633
1999	746
2000	774

三、資產擔保商業本票整體市場流通餘額：

(Asset-Backed Commercial Paper Outstandings)

<u>年 底</u>	<u>ABCP 流通餘額 (十億美元)</u>
1995	101
1996	147
1997	256
1998	382
1999	521
2000	604

茲針對抵押貸款證券化對銀行及金融市場所可能造成之影響分

析如下：

一、對創始機構 (Originator) 而言：

(一) 分散利率風險 (提前還款風險)，增加資產負債管理效率：

一般銀行所吸收之存款大多為短期資金，如銀行將其以不動產抵押貸款方式貸放出去，將造成資產與負債存續期間難以配合的窘境。當利率下跌時，抵押貸款的借款人會提前還款、重新融資，又造成銀行預期現金收益的損失。將抵押放款證券化之後，一方面可以縮小資產與負債間平均存續期間的差距，降低銀行資產負債管理的風險；另一方面可使銀行將利率波動所造成提前還款的風險轉由投資大眾來分擔，而賺取貸款與證券利率間的差額及手續費。

(二) 降低資金成本，提供新的融資途徑：

承作抵押貸款的銀行必須依賴本身信用先吸收存款再進行放款，所以銀行本身信用評等影響其資金成本，但經由抵押貸款證券化，銀行以承作的抵押貸款為擔保，經過適當的信用增強措施後發行證券，該證券信用等級可能比發行銀行本身更高，並獲得較高之發行價格，銀行可不需吸收更多的存款就可以獲得便宜之資金來源。再者，近年來很多投資者將資金從銀行存款轉向貨幣市場帳戶及共同基金，使得銀行傳統融資方式—存款之增長率越來越小，MBS 可以在不損害傳統融資方式的同時，提供給銀行另一個新的融資管道，減少銀行對存款的依賴，增加銀行經營靈活度。

(三) 提高資產流動性：

銀行的抵押貸款，每一筆的貸款利率、貸款成數、到期日及貸款期限等條件都不相同，其違約風險也互異，所以流動性很差。經由抵押貸款證券化，將其債權分割為單位金額較小

的標準化證券，再加入信用增強機制，可降低違約風險，最後透過特殊目的機構（Special Purpose Entity, SPE）發行 MBS 在證券市場上交易流通，銀行便可增加抵押貸款資產流動性，並提高銀行資產周轉率及獲利能力。

(四) 增加資金運用效率，提高自有資本對風險性資產的比率：

若抵押擔保證券的發行架構，是採取將放款資產視為出售的持份權證券(Pass-through Securities)，銀行可藉以減少放款科目餘額、縮減資產規模，提高其自有資本對風險性資產比率，使資金更能自由運用；銀行可避免為符合資本適足性規定，而使資金用途受限。此外，更可藉著抵押貸款證券化過程中有關貸款保險、支付保證等措施，引入保險公司或仲介機構，加強其對授信品質的監督，改善授信品質不良的問題。

(五) 促進銀行的專業和分工：

銀行放款資產證券化，可使銀行專門從事其較擅長的活動，例如知名度高、放款能力強的銀行便可大量承作不動產放款，再藉由證券化轉給其他投資人持有，本身賺取貸款起始費用（loan origination fee），而成為專業的貸款創造者（loan originator）；其次，本身有資金卻招攬不到貸款業務的銀行，則可在證券市場上買入 MBS，成為真正的放款者，與自己親自承作放款並無不同；另外，創造出貸款的銀行更可將與貸款有關的服務工作，如每月分期付款的收取、催繳、紀錄、甚至客戶倒帳時的法律工作等，外包給第三者，而創造貸款服務（loan service）之專業。換言之，在 MBS 市場的帶動下，銀行業務將邁向專業化、分工化。

(六) 開發新種金融商品：

在傳統存放款業務競爭激烈的情況下，銀行漸漸無法從傳統業務中獲利，但銀行可藉由各種抵押貸款證券化的金融創新中，開發出符合市場需求的產品，售予投資人而賺取收入。另外，在新的證券化商品不斷推出以滿足投資人不同需求的同時，財務工程技術也必須不斷進步、創新，如此，對一國金融業之現代化及多元化有很大助益。

二、對投資者而言：

MBS 因與不動產市場關係密切，在風險特徵上與一般長期債券（政府公債、公司債）有些不同，可成為投資人另一分散風險之投資工具；另外，由於 MBS 的現金流量類似長期債券且信用風險較低，在美國債券市場上其報酬率高於政府公債（僅低於垃圾債券），故除了是一般投資大眾極佳的投資工具外，更可滿足壽險公司及退休基金機構之資產負債管理及投資收益之需求。近年以來，一些衍生出之利率產品，如本息獨立支付之純本金（Principal Only, PO）、純利息（Interest Only, IO）產品，更具有避險功能，促使其產品市場更多元化。

三、對貸款者而言：

MBS 可以增加銀行抵押貸款資產的流動性，減少貸款承作的中介成本，因而可降低貸款人的貸款利率；同時，銀行發行 MBS 公開銷售給一般投資大眾，可獲得資金再貸放給更多的房屋貸款申請者，使得抵押貸款之資金供給維持充裕。

四、對資本市場而言：

抵押擔保債權證券化最直接的影響，便是增加資本市場交易的籌碼，擴大初級及次級市場的規模，使資金的需求者有更多的融資管道，資金的供給者有更多的投資選擇，使資金之供給及需求更直接地契合。以目前我國現況而言，金融機構房屋貸款餘額約略

為公債與公司債發行餘額的三倍，若有三分之一的房屋抵押貸款證券化，便可增加相當於目前整個債券市場的未結清金額，並使債券資本市場的規模擴大一倍，因此房屋抵押貸款證券化是擴展債券資本市場的另一途徑。

五、對不動產市場而言：

銀行因有 MBS 市場所賦予的資產流動性，自然樂於從事長期不動產貸款，並促進房屋市場的活絡。若房屋市場活絡，自然形成房屋貸款市場的成長，MBS 也就隨之蓬勃，兩者的發展是互為因果、互相依賴的。

證券化商品發行過程相當複雜，必須經由各種專業機構的參與及分工合作，才得以確保證券投資的安全性，另應用財務工程技術及金融創新的觀念，方能將不具流動性的放款債權及資產，轉換成具流動性、市場性的證券化商品。參考美國作法，各個參與機構在資產證券化過程中所扮演的角色及功能如下：

一、貸款創始者 (Originator)

即抵押貸款的原債權人。創始機構將所承作之放款或應收帳款等債權，彙集為大額之資產組群，作為資產證券化業務之擔保品。在美國貸款創始者包括：儲貸機構、相互儲蓄銀行、抵押公司、商業銀行、人壽保險公司、儲蓄互助社、不動產投資信託等。

二、發行者 (Issuer)

根據美國證券法 (Securities Act) 規定，MBS 或 ABS 的發行者係指發行證券的特殊目的機構 (Special Purpose Vehicle, SPV) 或信託機構 (Trust)。在資產證券化的過程中，為了要使證券化之資產不受貸款創始者信用及破產風險之干擾，貸款創始機構必須先將證券化之資產 (抵押債權) 出售或信託給另一個體，稱為特殊目的機構，以創造出信用等級高於原始貸款創始機構的資

抵押證券。在美國，特殊目的機構有三種型態：公司組織型態、信託組織型態、合夥組織型態。當貸款創始機構將抵押資產真正出售給特殊目的機構，並以其握有的資產為擔保發行證券，如此，貸款創始機構之財務狀況對證券投資人已無任何影響，此時特殊目的機構乃成為證券的發行者。此種作法可以將證券予以信用增強，而得到更高之信用等級。SPV 可能是貸款創始機構以外的獨立個體，例如美國半官方機構：FNMA、FHLMC，或者是信託公司，亦可能是貸款創始機構之附屬特定目的子公司（limited purpose subsidiary corporation）。

三、信託者 (Trustee)

信託者係以指定信託帳戶的方式，即所謂讓與信託 (Grantor Trust) 來隔離貸款創始機構的財務風險，此時信託者的功能有：

- (一) 擔任仲介的角色，與發行者簽訂信託契約，並負有對證券投資人發行受益憑證的責任，因此其功能是確保證券投資人之利益。
- (二) 服務者將借款人本金利息之償付，透過信託者帳戶轉交給投資人，如果信託者沒有立即將現金流量分配給投資人，則應負再投資之責任。

四、服務者 (Servicer)

服務者功能為負責管理該資產所產生現金流量之工作，包括本金利息支付、延遲付款的催收等，同時服務者也須負責定期提供投資人有關證券化資產之本金餘額、資產品質狀況及相關資訊。服務者收入來源有：向借款人收取利息與支付給證券投資人利息兩者之差價，以及其他的服務手續費。一般而言，服務者通常由原始貸放金融機構（貸款創始者）擔任此項行政服務的工作，理由為透過收款、付款及其他服務，原始貸放金融機構仍可與原來放

款顧客維持往來關係。

五、信用加強機構 (Credit Enhancement)

信用加強可以使證券的信用風險降低、發行利率下降及證券流動性提高。進行信用加強的機構可以是發行者，亦可為第三者。發行者可以透過償還請求權的設計（發行優先順位分組債券）或超額擔保的設定來加強信用；第三者則可以開發擔保信用狀（stand by letter of credit）或提供保證（guarantee）來增強信用，例如：美國三大官方及半官方機構（GNMA、FNMA 及 FHLMC）收購抵押貸款組群，並以政府信用加強證券本息之支付保證。

六、信用評等機構 (Credit Rating Agency)

美國證券交易法規定證券發行者有義務將相關資訊公開，促使投資大眾能判斷證券信用風險的程度。由於資產證券化係透過複雜且精密運作過程所產生之產品，各種信用加強機制亦難由一般大眾主觀判斷，因此，透過專門調查信用風險的公司，如 S&P、Moody's 等國際性信用評等機構之審查，更能增加證券化產品之流通性。在資產證券化過程中，決定是否有違約風險依據的是作為擔保之資產品質及證券化之發行架構，而非證券發行者本身之信用。所以信用評等機構的主要功能在於對支付本息之擔保資產進行審查，評估延遲給付或不完全給付的風險；尤其必須審查證券化過程中，信用加強的情形及分析發行之架構。

七、承銷商 (Underwriter)

通常為投資銀行或證券公司，承銷商自證券發行者買進剛發行之證券，以其專業能力及廣泛銷售通路，可掌握投資人需求動態，並將證券銷售給投資人並公開上市交易。

資產證券化業務若要順利推展，除了特殊目的機構設立外，稅負之考量，亦為一成敗關鍵。美國資產證券化機構通常採下列四

種型態發行證券，以減輕稅負：

一、讓與信託 (Grantor Trust)

發行人將擁有之資產債權考慮其未來資金流量、到期日等因素予以組群化，並將其抵押債權（或質權等）存託於信託機構，並據以發行表彰所有權之持份權證券 (Pass-Through Securities)，投資人購買該證券。由於該債券係由創始機構出售給投資人，發行人無須支付所得稅負。持份權證券是出售整批資產債權，並不屬於創始者負債，在其資產負債表內不予列示。另一方面，由於抵押借款人可能在償還期限前提前償還，持份權證券之現金流量存在著很高之不確定性，對投資者而言，不易評估其投資收益率。

二、負債證券 (Debt Securities)

發行人以購入資產為擔保，發行抵押擔保債券 (Mortgage Backed Bond)，抵押債權並不移轉予投資人。利用此一方式，發行機構若為公司或其他課稅主體，發行所產生之盈餘，必須負擔稅負。抵押擔保債券屬於發行者之證券融資，仍列於發行者之資產負債表內。對發行者而言，抵押擔保債券之發行並不須出售債權資產即可募集資金。在利率上升期間，發行者不會產生資本損失。由於發行者必須保有抵押債權一定比率的資本，其發行成本較持份權證券為高。

三、業主信託 (Owner Trust)

由於持份權證券之投資人常受到借款人提前償還貸款之影響，導致持有之債權證券被迫提前到期，因此發行人依業主信託制度發行順位還款抵押證券 (Collateralized Mortgage Obligation, CMO)。順位還款抵押證券被設計為多等級債券，即發行人同時發行到期日、不同利率之系列債券，並予以不同信用增強措施，來克服持份權證券不確定現金流量之困擾。然而，此種不同到期日

等級債券，並非合格之非課稅主體。故藉由業主信託之約定，創始機構可規避額外盈餘所增稅負，資產組群產生之收入、獲利及損失等項目皆直接轉交信託業主，可避免重複課稅。實務上，業主信託必須符合一定條件，才不會視為公司而予課稅。

四、不動產抵押投資管道(Real Estate Mortgage Investment Conduit, REMIC) 及金融資產投資信託法案 (Financial Asset Investment Trust, FASIT)

該信託工具是 1986 年賦稅改革法案 (Tax Reform Act of 1986) 所創造出來的，其擔保發行之貸款資產為不動產，解決了許多不動產稅負問題。1997 年美國為解決其他資產證券化所衍生之稅負問題，亦通過了金融資產投資信託法案 (Financial Asset Investment Trust, FASIT)。

參、資產證券化之風險管理

從金融監理角度言，風險 (Risk) 係指潛在可預測或不可預測之事件，對銀行獲利及資本可能產生之負面影響。依據 OCC 之檢查手冊 (Bank Supervision Process Comptroller's Handbook)，銀行從事資產證券化業務之主要風險有：聲譽風險、策略風險、信用風險、交易風險、流動性風險及法規風險。茲分述如下：

一、聲譽風險 (Reputation Risk)

聲譽風險係源於大眾負面印象影響銀行盈餘或資本之風險。此種風險使機構暴露於訴訟、財務損失及聲譽受損之狀況。本質上，聲譽風險決定於銀行內部風險管理程序運作之妥適性以及管理部門對銀行外部有關交易之應對方式與效率性。

聲譽風險具「品質」特性，反應出機構品牌價值強弱及被其他市場參與者認知程度。該項認知與機構長期表現有關。銀行在

證券化過程所扮演之各個角色，均涉及聲譽風險，但其承擔最重者為標的應收款之品質及其服務之效率性或其他信託業務操作層面上。

最有效控制聲譽風險方式為健全之業務計畫及涵括資產證券化各個層面之廣泛、有效風險管理與控制架構。在充分體認潛在長期市場、會計、法律及規定之影響與成本後，必須決定對證券化業務提供額外之財務支援來保護其商譽價值。

二、策略風險 (Strategic Risk)

策略風險源於錯誤之商業決策或對其不當執行致影響銀行盈餘或資本之風險。組織策略目標之協調性、為達成目標所發展之策略、所建構之資源及執行之品質均影響該風險之大小。評估銀行策略風險之暴險度，必須瞭解證券化對銀行在操作面、獲利性及資產/負債管理之長期影響。對證券化所增加之業務量，企業及策略計畫應提出長期資源需求。

競爭為策略風險主要來源之一。資產證券化提供銀行經濟之多樣籌資管道與傳統之競爭業務不同。此種激烈競爭之長期影響，可能侵蝕獲利空間並迫使銀行尋求更效率化及經濟規模。有限之獲利減少錯誤之空間，更彰顯策略重要性。

在進行資產證券化業務之前，經理部門必須比較其擬達成之策略及財務目標與該業務之風險及資源需求。周延之分析宜包括初次交易成本及履行服務義務必備之系統及技術升級成本。因為證券化業務影響銀行不同部門，評估必須敘述關鍵人員或部門之責任。涉入負責資產證券化之每一領域經理人，均應評估其策略風險。

三、信用風險 (Credit Risk)

信用風險源於債務人未履行與銀行所訂契約條件或未依約

定方式履行致影響銀行盈餘或資本之風險。有效之信用風險管理，應體認該風險移轉及資本計畫與其他資源需求之程度與限制，以支撐原有之風險等級。

銀行於證券化交易中出售資產將面對下述三種主要型態之信用風險：

(一) 違約之剩餘風險 (Residual exposure to default)

從事證券化業務銀行應評估在資產出售後，尚留存多少違約風險。要量化剩餘違約風險或其依附責任，應深度檢視該交易之現金流量架構及有賴其他機構支援。由於嚴重損失致提前償還之情形不常發生，在大部分資產組合中創始人吸收大多數已認列之損失。

(二) 留存於資負表之資產組合信用品質 (Credit quality of the remaining on-balance-sheet portfolio)

證券化之資產品質若較高，可提供一能預測、穩定之現金流量。較高及可預測之淨現金流量可轉化為較低之信用增強費用與較高之差額利差收益 (excess spread income)。該情形誘使銀行將較佳資產予以證券化，而將品質較差資產保留於資負表上。上述作法將危及過去基於歷史績效，所作之放款損失準備分析完整性。

(三) 提供道義追索之可能性 (Possibility that it will have to provide moral recourse)

創始銀行縱使在法律上沒有責任，在特定情況下，為保護其聲譽，可能被迫對績效較差之資產組合提供支援。在市場上，已有防止抵押證券信用評等下降或發生提前攤還而提供支援之案例，許多投資人期待創始人協助陷於困境之交易 (distressed transactions)。審慎業務慣例述明管理應考

量對營運不佳之資產組合，提供額外信用所有之潛在成本。銀行不僅提供直接財務援助，有時亦遭受更大風險，而要求較高之資本配置。

由於創始銀行吸收了大部分資負表內及證券化組合之預估損失，健全之承銷標準及實務成為避免過度信用暴險之最佳保障。通常，長期間急速成長、積極之競爭定價（teaser rate）及寬鬆之帳戶移轉策略，常是放寬承銷標準之徵兆。無論市場如何競爭，應注意資產品質決策。多數銀行體認到資產證券化對信用風險之廣泛影響，在策略上試圖將出售及留存之放款能具相同品質。如出售之放款品質高於留存者，管理上應認知表內資產風險增加程度以確保銀行資本水準，並維持放款及租賃損失準備於適當水準。當出售之放款品質低於留存者，企業及資本計畫應瞭解源於道義追索所增加之弱點（vulnerability）。

四、交易風險（Transaction Risk）

交易風險源於服務問題或產品提供致影響銀行盈餘或資本之風險。內部控制、資訊系統、員工忠誠度及作業程序均影響該風險之大小。對大多數出售證券化資產言，創始者承擔資產服務之責任。

在大部分證券化交易中，組合暨服務契約（Pooling and servicing agreement）為規範服務者責任之主要文件。有效率之服務可確保維持應收債權之品質。服務機構主要擔負責任為：

（一）交易處理（Transaction Processing）

過量之證券化業務可能會過度擴張系統並導致人為錯誤。對大部分交易言，服務機構同意遵循慣例及指導方針服務與管理應收債權。服務機構亦有責任及權利依文件規範付款及提領某存款帳戶。服務機構通常收受投資金額某一固定百分比

作為服務應收債權之報酬(在消費性產品如信用卡，比率介於百分之一·五至二·五之間)。

(二)績效報告(Performance Reporting)

銀行管理部門、投資者及信用評等機構均要求服務機構應正確即時報告證券化資產組合績效。服務契約通常對付款期間之帳務處理、報表之要求型態與結構予以特別規範，受託人及投資者無法忍受報表之錯誤與延遲。

(三)收款(Collection)

銀行之系統或人員在無法適應證券化所產生之新型態借款人或產品時，將暴露於交易風險中。當決定進入資產品質較差借款市場以競爭佔有率時，由於涉入信用風險較高需改變收款方式。前台關係經理(Front-line relationship manager)可能不適應而需投入密集人力，才得以確保在市場區隔方面長期成功之模式，另該資產組合表現亦會受其負面影響。如果與客戶長期關係之維持甚具價值，有些銀行會買回已證券化之資產並給予較寬鬆之條件。經理部門應瞭解上述購回放款之決定可能與「出售協定」(sales treatment)有所抵觸。

(四)流動性增強(Liquidity Enhancement)

部分服務契約要求出售機構或服務者有義務增加證券化應收債權之流動性。服務機構於評估代墊資金已無回收之可能，通常可不予代墊。許多案例顯示，服務機構評估代墊資金回收之決定取決於受託者之審核。

有效管理服務業務需徹底瞭解證券化過程，特別是有關之資訊與技術要求。經理部門應評估人力資源、技術層級及系統容量，以便處理證券化交易之計畫型態及數量。最大困難通常為系

統增強之發展，能在證券化放款組合及留存於銀行之資產組合方面，提供正確而即時之資訊。服務機構對於收款付息之錯誤及遺漏需有足額之保障。保障數量決定於銀行服務放款之大小及型態。為減低信用暴險，組合暨服務契約至少每年須經服務者獨立會計師之審核。每一銀行需具備援系統且每年至少應測試一次。最低限度，應遵循銀行通函 177 號 (Banking Circular 177) - 「公司緊急應變計畫 (Corporate Contingency Planning)」所提供之指導原則。

五、流動性風險 (Liquidity Risk)

流動性風險源於銀行無法履行其到期債務而須承擔不利之損失 (without incurring unacceptable loss) 致影響銀行盈餘或資本之風險。如有周全計畫及一有效率之流程架構，證券化可對資負表內資產提供流動性，亦可作為創始槓桿業務之資金來源。

銀行必須預備循環信用應收債權因到期或提前償還金額之可能回流至資負表之金額。其主要風險在於潛在大量證券化組合資產，可能在非預期或不適當期間需要資負表內資金之融通。其次關切重點為，完全依賴證券化市場來吸收新發行資產抵押證券之議題，此為僅從事證券化業務之創始銀行比較容易形成之錯誤決策。上述銀行可能僅夠分配適足資本以支撐證券化市場之資金流量。如因市場情況或銀行本身因素被迫自行於帳上持有資產時，該策略將導致資金籌集之困境。

流動性風險管理應包括：

- (一) 資產化證券預計被攤還之數量。
- (二) 配合未來資金需求之計畫 (包括需求之預估時點)。
- (三) 提前攤還之存在因子 (The existence of early

amortization triggers)

(四)快速獲取大量流動性替代方案之分析。

(五)再次發行證券之作業相關問題。

銀行應監視所有未結清交易並作為日常流動性管理之一部分。銀行應建立系統預先注意即將面臨之提前攤還因子，其係以連續三個月應收組合資產產生負現金流量（超額利差）為啟動點。緊急應變計畫必須預估可能問題及充分假設，在證券攤銷期間，管理部門被要求就所有應收債權找尋籌資替代方案。

六、遵循風險(Compliance Risk)

遵循風險源於因違反或與法律、規則、規定、營業慣例或道德標準不一致而影響銀行盈餘或資本之風險。遵循風險亦起因於法律或規則規範銀行對客戶特定產品及活動可能模稜兩可或未經檢驗之狀況下。

消費者保護法及有關規定，包括公平借貸法及其他反歧視法律，即使在創始貸款之初即有意證券化，也將會影響銀行承銷及服務作業。經理部門應確保涉入承銷及服務功能（包括收款）人員，完全恪遵上述法律及規定。

肆、檢查目標及程序

聯邦準備理事會訂定之「商業銀行檢查手冊(Commercial Bank Manual)」以國家銀行為例，原則上證券化業務檢查頻率與一般財務業務檢查相同且同時進行，亦即每12個月或18個月檢查一次。

以聯邦準備銀行紐約分行資料為例，其資產證券化業務實地檢查目標及程序詳述如下：

一、檢查目標

(一)辨識與證券化業務相關之潛在風險及其型態，特別在信用、

市場、流動性、操作及聲譽風險方面。

- (二) 判斷證券化業務風險是否已作適當辨識及衡量並評估風險管理功能在業務階段及整體層次之適足性。
- (三) 判斷董事會及管理階層監督證券化業務之程度，另評估銀行有關證券化業務政策、程序、風險限額與內部控制功能之妥適性與守法性。
- (四) 評估銀行稽核系統之適足性及審視重大發現、追蹤方式與管理措施以改正任何缺失。
- (五) 判斷保留利益 (retained interest) 係經適當評估。
- (六) 評估與判斷有關董事會規定、命令及政策之遵循程度。

二、檢查程序

- (一) 1. 取得銀行所有資產抵押證券清單。對資負表之會計科目予以核對並審核獨立評等機構對該證券所作之信用評等。判斷採用之會計方式及程序，在證券化資產開始與過程期間是否適當。
- 2. 取得及審查銀行已證券化資產型態與數量資訊。另獲得與證券化資產保證、承銷及服務業務有關之潛在契約或可能責任。
- (二) 審查母公司政策、程序以確保銀行及非銀行分支機構係遵循信用評估審慎標準與所有證券化暴險之核准程序。檢查程序應包括每一放款或組合所具信用風險作全盤及獨立之評估，並依循定期信用審核以監視暴險期間之績效。銀行若有投資於資產抵押證券者，應判斷其是否僅依賴外部評等機關之結論。
- (三) 判斷銀行於證券化過程所扮演之角色如服務者、信用增強者或投資者等，是否已建置嚴謹之信用標準。

- (四) 判斷主要政策及程序，包括內部信用審查、核准手續與內在 (in-house) 暴險限額是否定期為銀行董事會審查及核可。
- (五) 判斷評估機構內部控制程序及其他涉及證券化業務機構之財務實力 (financial strength) 是否適當。
- (六) 取得發生違約時，可實行之補償概要文件，以提供信用增強。證券化資產創始者及投資者在此議題上，應有公開說明書 (prospectuses)。取得上述說明書可作為資訊重要來源。說明書通常包括信用增強、違約條款及次順位協議 (subordination agreement) 等資訊。另從說明書可獲得購買或出售證券之文件確認。
- (七) 不論於證券化過程擔任何種角色，資產抵押證券文件應確認機構所應承擔損失之法律責任。
- (八) 判斷獨立風險管理程序及資訊管理系統 (MIS) 現況，其是否在整體及個別交易層次上能監督證券化組合之績效。
- (九) 確認機構在扮演創始者、組合者 (Packager) 或承銷者角色時，已有書面政策敘明，當發生違約組合損失超過所有契約信用加強者，有關再購回資產及償還投資者之措施。否認違約資產組合再購回或自外於標的契約條款者，實際上對銀行來說，仍可能對所有出售資產負法律責任。審核及報告機構已購回劣等品質資產 (poor-quality assets) 或補償投資者之情況。
- (十) 在分析機構資本或準備水準適足性時，對證券化相關資產作不利信用風險 (adverse credit risk) 之分類。評估資產抵押證券信用風險及區別不利之信用風險。將分類資產表列。評估該分類對機構資本適足性及整體穩健性之影響。
- (十一) 當決定遵循內部信用暴險額度時，統計所有依據契約應受

金融保證、承諾及任何有關對同一債務人投資之約束放款、信用延伸 (extensions of credit)、債務及權益證券之證券化暴險，。

- (十二) 在日常、即時礎下，評估銀行對資產抵押證券之評估假設、模型方法論及其用來建立、評估與調整保留利益之持有價值 (carrying value)，判斷其是否慎重、適當。
- (十三) 判斷稽核或內部複審人員是否定期對留存於機構之證券化資產資料完整性、演算方式 (model algorithms)、重要依存假設及估價與模型過程進行審核。
- (十四) 審核以風險為基礎之資本計算方式，判斷其是否包括因證券化業務衍生之所有追索義務之確定與報告。
- (十五) 確認持有保留利益占所有權益資本比率之內部限額規定。
- (十六) 建立足夠適當流動性應變計畫以應付市場失靈狀況。進一步判斷過度依賴證券化業務作為日常核心資金來源者，是否會造成流動性問題。
- (十七) 判斷是否適當建立一致、穩健會計制度以滿足管理監督報表需求、一般公認會計原則報告要求及其評估假設與方式。確認資產證券化業務已作充分揭露並與機構承作之數量及複雜程度相當。
- (十八) 在整體及個別交易基礎上，建立風險暴險額度與要求。
- (十九) 審核證券化資產之行業別或地理別風險集中度。在審核放款組合時，應註記依附資產 (underlying assets) 之產業或地理過度暴險金額。
- (二十) 除政策已限制直接信用暴險額外，確認機構已發展有關個別創始者、信用增強者、信託者及服務者之暴險政策。
- (二十一) 審核銀行機構從事承銷業務之政策，監視禁止購買已署名

資產抵押證券（under-written asset-backed securities）之狀況。信用審核、籌資能力及核准限額決定機構購買及持有未售證券之能力。所有潛在證券暴險額應在法定貸款額度內。

(二二) 確認內部系統及控制足以追蹤內部暴險績效與狀況，另監視機構內部程序與限額遵循度。提供足夠稽核軌跡及內部稽核涵蓋範圍。確認報告具足夠範圍與細項頻率。

(二三) 確認管理資訊系統提供：

1. 涉入每一證券化交易之機構清單。
2. 產業及地理集中風險之清單。
3. 特定創始者、服務者、信用增強者、信託者及承銷者之所有暴險資訊。
4. 月組合收穫量分析或與預期比較之特定產品帳齡及績效分析資訊。
5. 對資深管理人員及董事提供定期即時有關機構從事證券化業務及所衍生信用暴險之資訊。
6. 現金收款靜態組合分析。
7. 敏感性分析。
8. 契約遵循度之聲明。

(二四) 確認內部稽核人員定期檢查所有證券化業務各層面（facets）。

(二五) 檢視政策及程序與現行州及聯邦貸款限額之遵循性如聯邦修訂法規（Revised Codes）5136 條款。必須分析這些要項以決定某一資產抵押證券之發行係為投資或對個別債權人依附組合資產之放款。如果順位還款抵押證券（Collateralized Mortgage Obligation, CMO）為美國政

府機構所媒介發行或保證者可不受上述限制。

(二六)判斷資產抵押證券機構之承銷是否：

1. 非為分支構機且經全國認可統計評等機關之評等。
2. 為 Fannie Mae、FHLMC 及 GNMA 所發行、保證，或代表其契約利益之證書。

(二七)判斷購買高風險抵押擔保證券是否減低銀行整體利率風險。不論該證券是否已減低利率風險，判斷銀行有無每季作書面評估。

(二八)審核及討論所有書面例外、違規、內部控制例外、分類管理及所獲得管理之回應。

(二九)審查與資產擔保商業本票 (asset-back commercial paper) 計畫相關之所有銀行流動性協議並判斷該協議是否存有任何與信用相關之內容。

伍、內部控制及內部稽核功能

美國 COSO 委員會 (Committee of Sponsoring Organizations, COSO) 於 1992 年提出之「內部控制-整合性架構」研究報告，定義內部控制「為一種過程，此過程由企業之董事會、管理者及其他員工共同履行」。美國審計準則委員會 1996 年所發布之第 78 號稽核準則公報 (Statement on Auditing Standards)，關於內部控制即採 COSO 定義，其基本概念為：內部控制為達成目的之手段，並非目的本身；內部控制僅期望對董事會及管理部門提供合理保證而非絕對保證；內部控制係朝向一個或多個、分開但重疊目標之實現；內部控制之要素，由低至高依序為控制環境 (control environment)、風險評估 (risk assessment)、控制活動 (control activities)、資訊與溝通 (information and communication) 及

監控 (monitoring) 等五大成分。另根據 1999 年 6 月內部稽核人員協會董事會所核定內部稽核定義如下：「內部稽核為一獨立、客觀之保證及諮詢活動，用來增加機構附加價值及改進其營運業務。內部稽核藉著有系統、專業化方式來達成組織目標，並用以評估及改進風險管理、控制及管制過程之有效性」。

由以上說明可知，內部控制範圍包括：組織系統、作業處理程序、人事制度及內部稽核制度等。其中內部稽核功能在衡量管理控制工作之效率，屬內部控制之一環。內部稽核之任務係透過內部之獨立檢查及具體績效評估，以確定業務之處理有無缺失，適時提供建議以求內部控制制度得以持續實施。建立內部控制制度基本目的為：促進企業組織的有效營運；而內部稽核設置目的為：協助管理階層調查、評估內部控制制度並提供改善建議，以求內部控制制度之落實。

聯邦準備理事會訂定之「交易與資本市場業務檢查手冊 (Trading and Capital-Markets Activities Manual)」對銀行從事資產證券化業務之應注意要項有詳細規定，以紐約聯邦準備銀行提供資料為例，有關資產證券化業務內部控制與內部稽核功能查核重點如下：

一、內部控制

- (一) 判斷控制是否適當以確認機構係遵循現行法律、規定、報表要求及會計標準。
- (二) 判斷作業區隔 (operational separation) 是否足夠及職務輪調之存在 (rotation of duties exist)。
- (三) 判斷有關資料進入與使用之保護措施是否適當。
- (四) 判斷每一證券化交易之放款服務聲明 (loan servicing statements) 及信託報告是否定期檢討調整。

- (五) 調整由第三者提供放款之證券化交易金額數量 (dollar volume)，包括分行或子公司及資負表內或已出售之所有項目。
- (六) 獨立地確認放款服務數量與機構記錄相符，相關現金流量書面資料能支持其保留利益之評估。
- (七) 判斷因政策變數 (policy parameters) 而產生之誤差 (deviations) 是否已受控制並符合董事會所核准之政策。
- (八) 對資負表內之放款，確認放款服務聲明之放款金額數量與機構記錄之金額數量相符。
- (九) 對已證券化之放款，確認放款金額數量之服務聲明與支持其評估保留利益現金流量之書面金額數量相符。
- (十) 按月審查出售放款帳戶之調整項目 (reconciliations)。
- (十一) 當銀行在證券化交易保有追索責任時，判斷內部控制是否適當以確保對信託人之付款不會超過銀行應負擔之契約義務。

二、內部稽核功能

- (一) 取得銀行內部證券化業務之稽核時程表。
- (二) 取得銀行證券化業務之稽核程序、計畫及風險評估，包括保留利益之記帳、報告及計價方式。
- (三) 取得執行上述稽核之所需資源之書面資料。
- (四) 判斷稽核之獨立性與範圍或獨立之審核是否能足夠確認政策、風險管理、內部控制及缺失改善之遵循度 (compliance deficiencies)。稽核範圍應包括：
 1. 計價過程之評估，包括依存假設之合理性。
 2. 模型演算過程及驗證功能 (validation mechanisms) 合理性之評估。

3. 當有第三者提供放款時，不論為分行或分支機構，對現存放款作獨立之確認以判斷餘額是否與內部控制相符合。
 4. 遵守交易契約之確認。
 5. 組合暨服務契約之遵循度。
 6. 資訊系統正確處理資料之適足性。
 7. 資訊系統、法規及公關報告之正確性。
 8. 政策指導方針之遵循度。
 9. 每月持有待出售放款(loans held for sale)調整數之審核。
 10. 待出售放款之適當會計處理。
 11. 自待出售放款帳戶轉為機構一般放款帳戶之適當會計處理。
 12. 保留利益原始記帳、後續評估及管理報告之適當會計處理。
- (五) 判斷是否已執行定期及非計畫之審核。
- (六) 判斷是否定期將內部稽核結果報告董事會或指定之委員會。
- (七) 判斷管理階層對最近之稽核或獨立之審查報告反應是否合理。

陸、會計處理

由於資產證券化將各種資產重新架構組合或分割，使資產移轉效力發生變化，增加了會計上處理之複雜度。被移轉之資產是否視為出售或僅為擔保負債，決定於該項移轉是否符合某些特定條件，即會計上是以「出售」或「融資」方式處理。美國財務會計準則委員會(Financial Accounting Standards Board, FASB)針對上述問題，先後發表了第125號及第140號公報，茲分述如下：

一、FASB 125 - 金融資產移轉與服務暨負債消滅之會計原則

(Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities)

(一)公布日期：1996年6月。

(二)適用範圍：各種證券化資產如汽車貸款、房屋貸款、信用貸款、及小型企業貸款等。

(三)取代之會計公報：該公報取代了 FASB77 號公報 - 移轉者附追索權應收帳款移轉報告原則 (Reporting by Transferor for Transfers of Receivables with Recourse)、FASB122 - 抵押服務債權會計原則 (Accounting for Mortgage Servicing Rights) 及財務會計準則委員會新興議題任務小組 (Emerging Issues Task Force) 所發布之多項指導原則。

(四)規範重點：

1. 界定出售之要件，以有效控制作為出售人是否已放棄被移轉資產之權利為判斷基準。資產證券化交易，如符合下列條件，才可視為出售：

(1) 移轉之資產與出售人無關。亦即出售人及債權人無法影響該資產，即使於破產及其他接管情況下，亦是如此。

(2) 出售人不經由下列約定，而仍對移轉之資產保留有效控制：

a. 在資產到期日前有權利及義務將其買回。

b. 出售資產之價值於市場無法即時獲得者，出售人有權將其買回。

2. 證券化將各項資產及負債分割成各項組合後，可分別入帳。

3. 會計處理若要符合表外化 (off balance sheet)，證券化資產，需能獨立於原債權人，另資產受讓人可取得該資產交

換或擔保之權利。

二、FASB 140 - 金融資產移轉與服務暨負債消滅之會計原則

(Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities)

自銀行資產證券化業務適用 FASB 125 以來，由於其強調風險及報酬，產生了下列問題，致在應用上產生諸多困擾：

- (一) 證券化交易之主觀評價決定其風險或報酬，同一交易，不同機構有各種評價標準，欠缺一致性原則。
- (二) 該原則認為資產係不可分割的 (indivisible) 主體，此與資產證券化市場之實務發展大相逕庭。
- (三) 該原則高度依賴交易之連續性 (sequence)，若產生間斷，如何適用，莫衷一是。

為解決上述爭議，遂有 FASB 140 之提出，它取代了大部分 FASB 125 之條款，其主要內容如下：

- (一) 公布日期：2000 年 9 月。
- (二) 適用範圍：應收帳款之出售移轉、部分利益之出售移轉、附追索權之出售移轉、公告資產如抵押品之出售移轉、附買回協議移轉、證券融資移轉、聯合貸款及參加貸款移轉、證券化信託資產之移轉等。
- (三) 取代及修正之會計公報：該公報取代了 FASB 125 號公報及修正部分 FASB 115 號公報-特定投資債務及股權證券會計原則 (Accounting for Certain Investments in Debt and Equity Securities) 及 FASB 65 號公報-特定抵押銀行業務會計原則 (Accounting for Certain Mortgage Banking Activities)。
- (四) 規範重點：
 1. 界定出售之要件，以有效控制作為出讓人是否已喪失被移轉

資產之控制權 (surrender control) 為判斷基準。資產證券化交易，必須同時符合下列條件，才可視為出售：

- (1) 移轉之資產已與出讓人分離。亦即出讓人及債權人無法影響該資產，即使於破產及其他接管情況下，亦是如此。
 - (2) 每一受讓人有權處分及交換被移轉之資產，對受讓人執行、交換其權利，沒有任何限制。每一受讓人對出讓人無須提供任何補償 (Each transferee provides more than a trivial benefit to the transferor)。
 - (3) 出讓人不經由下列任何方式之一，而仍對移轉之資產維持有效控制：
 - a. 在資產到期日前有權利及義務將其買回或取回之協議 (an agreement that both entitles and obligates the transferor to repurchase or redeem them before their maturity)。
 - b. 非經由出清選擇權之方式，而係單方面迫使持有者歸還其特定資產之能力 (the ability to unilaterally cause the holder to return specific assets, other than through a cleanup call)。
2. 由出讓人受讓或取得之負債及衍生性金融商品作為金融資產移轉之部分，如實際可行，起初即應以公平市價衡量。在移轉資產中如有服務資產及其他保留利益者，如實際可行，在資產出售時應依前期持有價值 (carrying value) 分配衡量，如有保留利益，在移轉時，應依據其相對之公平市價予以評估。
3. 服務資產及負債 (servicing assets and liabilities) 應以下列方式加以衡量：

- (1) 依據預估淨服務業務損益比例加以攤銷(amortization in proportion to and over the period of estimated net servicing income or loss)。
 - (2) 依據公平市價評估問題資產或新增之義務(assessment for asset impairment or increased obligation based on their fair values)。
4. 負債若符合下列任一情況者，可免負擔(derecognize)：
- (1) 債務人已償還債權人並免除債務義務者。
 - (2) 因司法或債權人因素，致使債務人在法律上免除主要債務人者。
- 如此，負債並不因實質失效原因而滅失(a liability is not considered extinguished by an in-substance defeasance)。

(五) 揭露要項

- 1. 規範債務人應：
 - (1) 將擔保之金融資產重新分類，並與其他資產在財務報表中分開列示，以防止證券化之對手有權利依契約或慣例購買或典當擔保品。
 - (2) 揭露未經重新分類之擔保資產，並於財務報告中顯示。
- 2. 規範證券化對手應揭露有關已接受或允許依契約或慣例購買或典當之擔保品。揭露必須包括擔保品期末公平價值、已售出或處分之擔保品、擔保品之來源與運用資訊。
- 3. 從事證券化業務機構應揭露有關會計政策、交易量、現金流量、決定保留利益公平市價主要假設及主要假設改變對公平市價敏感性之資訊。另應揭露證券化資產及其他服務資產有關：

- (1)所有名目本金、未結清餘額、期末各類已認列或免認列財務報表之部位。
- (2)期末之違約報告。
- (3)期間之信用損失。

柒、管理資訊與報表稽核系統

一、管理資訊系統

機構之報告與文件必須提供原始保留利益之評估及持續地分析問題資產。組合績效資訊可協助機構之完善管理，並在量化基礎上，保有充足之經濟資本來涵括證券化交易所產生之各種風險。欠缺足夠之管理資訊系統（management information system, MIS）將阻礙機構監控特定組合績效及證券化業務之能力。

由以上說明可知，銀行從事資產證券化業務有關 MIS 報告應敘明下列事項：

(一)對每一證券化業務之彙總說明

該彙總說明應包括相關交易條件如：抵押品型態、額度金額（facility amount）、到期日、信用增強及優先/次順位性質、財務約定附買回權利及對手暴險等事項。

(二)全體組合暨個別產品別之績效報告

該績效報告應包括毛收益率、延遲比率及重大損失、不履行情況、付款或提前付款比率及超額利差金額等資訊。該報告應同時表達個別組合基礎及全體資產之實況。

(三)個別組合月收穫量分析（Vintage analysis for each pool using monthly data）

收穫量分析可協助管理階層瞭解過去績效趨勢，並對未來之延遲比率、提前付款率、不履行情況及保留利益之價值

獲得啟示。管理階層可利用收穫量報告來比較過去承銷標準績效，包括已實施之信用計分模型，來確認放款計價是否與風險程度相當。

(四) 靜態組合現金收款分析 (Static-pool cash-collection analysis)

該分析包含審查每月相對於本金之現金收入以決定資產組合之現金收益率，並與應收收益率比較，追蹤月變動量。如現金收入小於原先對保留利益之評估，該分析可提供管理階層及董事會有關保留利益收款或展延實務可能發生問題之預警資訊。

(五) 敏感性分析

該分析衡量延遲比率、提前付款或付款比率及折現率變動之影響，協助管理階層建立並確認保留利益之持有價值 (carrying value)。壓力測試每季至少實施一次。分析必須考量潛在不利趨勢並決定每一事件最佳、可能及最壞情況。其他須考量之影響因素為延遲比率增加對收款人員衝擊、現金流量時程、利差帳戶歸收因子 (spread-account capture triggers)、超額擔保因子 (over-collateralization triggers) 及提前攤銷因子 (early-amortization triggers)。管理階層應定期量化及書面紀錄其對盈餘與資本之潛在影響，並將結果報告董事會。

(六) 契約遵循之聲明 (Statement of covenant compliance)

每月至少根據組合暨服務契約，確認持續遵循交易績效 (deal-performance triggers) 因子之聲明。績效因子包括提前攤銷、利差帳戶歸收、超額擔保需求之變更及造成服務者撤離之事件。

二、報表稽核系統

美國聯邦金融機構檢查委員會（Federal Financial Institutions Examination Council, FFIEC）基於制訂銀行統一申報財務報表之使命，依銀行規模大小及有無國外分支機構，設計不同種類之銀行統一申報報表（Uniform Bank Call Report），並不斷根據最新金融情勢發展，將報表種類及格式予以修正，使報表更具監督功能。

FFIEC 為加強對銀行資產證券化業務之瞭解與分析，除以往各種報表所規定申報之證券化相關統計外，另於本(2001)年 6 月底起，增列 RC-S（Securitization and Asset Sale Activities）報表，要求各銀行將從事資產證券化業務之統計資訊按季填報。茲以有國外分支機構之美國銀行為例，其所填報之 FFIEC 031 類報表，有關資產證券化業務之報表填報規定如下：

（一）RC-B（Securities）

該報表針對銀行持有之抵押擔保證券（MBS）及資產擔保證券（ABS），依據目的不同，作以下統計：

單位：千美元

	非交易目的		交易目的	
	Held-to-maturity		Available-for-sale	
	攤銷成本價	公平市價	攤銷成本價	公平市價
● 抵押擔保證券(MBS)：				
a. 持份權證券：				
(1)GNMA 保證				
(2)FNMA 及 FHLMC 發行				
(3)其他持份權證券				
b. 其他抵押擔保證券：				

(包括 CMO、REMIC 及 Stripped MBS)：

- (1) FNMA、FHLMC 或 GNMA 發行或保證
- (2) FNMA、FHLMC 或 GNMA 發行或保證之 CMO
- (3) 所有其他之 MBS

● 資產擔保證券 (ABS)：

- a. 信用卡應收款
- b. 房屋淨值額度
- c. 汽車貸款
- d. 其他消費者貸款
- e. 工商貸款
- f. 其他

(二) RC-D (Trading Assets and Liabilities)

該報表係針對銀行持有之平均交易性資產 (average trading assets, Schedule RC-K, item 7) 大於二百萬美元，所作之統計：

單位：千美元

● 資產	金額
國內機構之抵押擔保證券(MBS)：	
a. 持份權證券由 FNMA、FHLMC 或 GNMA 發行或保證者	
b. 其他抵押擔保證券由 FNMA、FHLMC 或 GNMA 發行或保證者 (包括 CMO、REMIC 及 Stripped MBS)	
c. 所有其他之 MBS	

(三) RC-S (Securitization and Asset Sale Activities)

該報表係專為銀行資產證券化業務所設計之統計表格，茲分析如下：

1. 以欄(column)為區分，共有七欄，分別為：

- (1) 1-4 人住宅貸款
- (2) 房屋淨值額度
- (3) 信用卡應收款
- (4) 汽車貸款
- (5) 其他消費者貸款
- (6) 工商貸款
- (7) 所有其他貸款與租賃

2. 以填報項目為區分，共有三大類，十二項目分別為：

● 銀行證券化業務 (Bank Securitization Activities)

- (1) 以服務保留、或附追索權、或其他賣方提供信用增強之資產出售及證券化未結清本金餘額

(Outstanding principal balance of assets sold and securitized by the reporting bank with servicing retained or with recourse or other seller-

provided credit enhancement)

(2) 以下列方式提供來自(1)項目之附追索權、或其他賣方提供信用增強之信用暴險最高額度：

(Maximum amount of credit exposure arising from recourse or other seller-provided credit enhancement provided to structures reported in item (1) in the form of :)

a. 保留之純利息分離金額

(Retained interest-only strips)

b. 擔保信用狀，次順位證券及其他增強措施

(Standby letters of credit, subordinated securities, and other enhancements)

(3) 提供(1)項目流動性之未使用承諾

(Reporting bank's unused commitments to provide liquidity to structures reported in item (1))

(4) (1)項目中之逾期放款：

a. 逾期 30-89 天

b. 逾期 90 天或以上

(5) 以服務保留、或附追索權、或其他賣方提供信用增強之資產出售及證券化打銷及回復金額：

(Charge-offs and recoveries on assets sold and securitized with servicing retained or with recourse or other seller-provided credit enhancement)

a. 打銷金額 (Charge-offs)

b. 回復金額 (Recoveries)

(6) 賣方利益以下列方式持有之金額：

(Amount of ownership (or seller's) interests carried as)

a. 證券 (Securities)

b. 放款 (Loans)

(7) 項目(6) a 中之逾期放款：

a. 逾期 30-89 天

b. 逾期 90 天或以上

(8) 項目(6) a 中之放款打銷及回復金額：

a. 打銷金額

b. 回復金額

● 證券化業務由其他機構發起或建立者

(For Securitization Facilities Sponsored By or Otherwise Established By Other Institutions)

(9) 由銀行提供以擔保信用狀，購買次順位證券及其他增強措施之信用暴險最高限額

(Maximum amount of credit exposure arising from credit enhancements provided by the reporting bank to other institutions' securitization structures in the form of standby letters of credit, purchased subordinated securities, and other enhancements)

(10) 由銀行提供其他機構證券化架構未使用額度

(Reporting bank's unused commitments to provide liquidity to other institutions' securitization structures)

● 資產出售 (Bank Asset Sales)

(11) 附追索權之資產出售或其他賣方提供之信用增強且非為報告銀行所證券化之金額

(Assets sold with recourse or other seller-provided credit enhancements and not securitized by the reporting bank)

(12) 提供(11)項目之附追索權或其他賣方提供信用增強之信用暴險最高額度

(Maximum amount of credit exposure arising from recourse or other seller-provided credit enhancements provided to assets reported in item (11))

捌、資本適足性

銀行應針對其資產證券化業務提供足夠資本以充分支撐其所涵蓋之風險暴露。聯邦準備銀行已建立以風險為基礎之指導綱要，並設有最低資本比率，銀行從事證券化業務其風險若高於一般水準者，應符合最低資本規定。在評估資本適足性時，檢查人員應確認銀行附追索權之資產出售、經由信用衍生商品(credit derivatives)所承擔或減低之信用風險及所提供證券化計劃之直接信用替代(direct credit substitutes)與流動性措施能正確辨識及衡量其暴險，並確保整體之資本適足性可支撐有關之信用、市場、流動性、聲譽、作業及法規等風險。監理及檢查人員應確認銀行已建立合理方式，並依相關證券化交易提前攤還事件及流動性措施之經濟實質(economic substance)所產生之信用暴險來分配資本。

監理人員如判斷銀行資本水準已不足提供信用暴險潛在損失之

保障時，應將其缺失反應於銀行之 CAMELS 或 BOPEC (銀行控股公司) 評等上。進一步，監理及檢查人員應與銀行管理階層或 (及) 董事會，討論上述資本缺失。銀行應發展及建立一套加強整體資本適足性之計畫，以適當涵括證券化業務所暴露之所有風險。

在以風險為基礎之銀行監理資本架構 (risk-based capital framework) 下，存在著下列三種特性，影響銀行資產證券化業務：

- 一、該架構分配放款、資產抵押證券及其他有關證券化資產之風險權數。
- 二、銀行控股公司於現行證券化過程中，將附追索權資產移轉於賣方者，應明確要求其握有資本以涵括表外之信用暴險額度。然而，該特定資本需求端視移轉機構之追索權保留額度及附追索權出售之型態。
- 三、銀行藉擔保信用狀或其他方式對資產證券化業務提供信用增強者，應握有資本以涵括表外之信用暴險額度。

資產擔保證券之風險權數決定於發行者及擔保品是否為抵押相關資產 (mortgage-related assets)，茲將現行風險權數規定敘述如下：

一、抵押擔保證券 (MBS)

(一) 持份權證券 (Pass-Through Securities) 由下列機構擔保者：

- | | |
|-------------------------|----------------|
| 1. GNMA | 權數為 0 |
| 2. FNMA、FHLMC | 20 percent |
| 3. 私人商號 (Private label) | 50-100 percent |

(二) 順位還款抵押證券 (CMO) 由下列機構擔保者：

- | | |
|---|--------------------|
| 1. GNMA、FNMA、Freddie Mac | 權數為 20-100 percent |
| 2. 全額放款或私人商號之持份權擔保
(Backed by whole loans or private | 50-100 percent |

label pass-throughs)

3. 分離式之 CMO

權數為 20-100 percent

二、資產擔保證券 (ABS)

(一) 由信託或特殊目的機構發行且非為不動產抵押資產所擔保者，風險權數為 100 %。

(二) 由聯邦或地方政府所發行者，風險權數為 20 %。

巴賽爾銀行監理委員會於 2001 年 1 月發布之「新巴賽爾資本協定補充報告-資產證券化」諮詢報告中表示，若將來允許銀行使用內部評等模型來計算自有資產之資本計提，可包括證券化之資產，例如一般放款及抵押放款。巴賽爾銀行監理委員會所建議之資產擔保證券適用之風險權數如下：

評等結果	風險權數
AAA 至 AA-	20%
A+ 至 A-	50%
BBB+ 至 BBB-	100%
BB+ 至 BB-	150%
B+ 至 未接受評等	應加入信用增強 (credit enhancement) 並自資本中扣除

* 採用標準普爾 (Standard & Poor's) 評等方式。

在以風險為基礎之資本規範下，有關附追索權之資產出售，係依下列二步驟，計算其風險權數：首先將出售資產之所有金額乘以百分之百信用轉換係數，轉換為表內信用相當額，惟低度追索權交易 (low-level recourse transactions) 及小型企業債權移轉 (small

business obligations transferred) 附追索權者除外。第二步為將信用相當額乘以債務人、保證人或擔保品相稱之風險權數類別。對附追索權資產移轉應計提之資本，不應超過依契約所訂追索權應負擔之額度。該規定限制銀行契約交易之損失風險或被追索之額度，應小於被移轉資產最低資本適足之計提金額。如低度追索權交易有信用增強機制者，銀行所應負契約最高被追索額度，通常限定於依據一般公認會計原則，帳列於資負表上之該資產金額。

玖、結論與建議

一、結論

銀行金融資產證券化，除可降低銀行資產負債管理的風險，增加資產流動性外，並能增加資金運用效率，提高自有資本對風險性資產的比率。另外更可藉著資產證券化過程中之貸款保險、支付保證等措施，引入保險公司或仲介機構，加強對銀行授信品質的監督。我國銀行若能善用此一工具，可開發出另一新業務並活絡金融市場，同時也使貸款更加透明化，避免許多的缺失與人為舞弊，有效地建立另一籌資管道，再加上由於信用風險分散的觀念及評等方法的引進，將使投資者獲得更多的保障與投資選擇，可謂一舉數得。資產證券化市場目前已為一全球性市場，銀行佔有率約為百分之六十五，我國勢無法自外於此一趨勢，政府部門、銀行及有關機構應加速推動資產證券化業務。

美國聯邦準備理事會體認以風險為基礎之監理重要性，並強調科技發展日新月異不斷影響金融業變革，隨著科技持續創新，金融商品不斷推陳出新，金融監理的觀念與方式也必須有所調整，對於銀行資產證券化業務亦然，應衡量銀行對其所採用風險管理模式之妥適性。

美國聯邦準備理事會、財政部金融局、聯邦存款保險公司及儲貸機構監理局於1999年12月聯合發布「資產證券化業務監理指導原則」(Interagency Guidance on Asset Securitization Activities)，巴塞爾銀行監理委員會亦於2001年1月針對資產證券化業務頒布有關新資本協定補充諮詢報告白皮書，其受重視程度可見一般。

銀行從事資產證券化業務之主要風險為：聲譽風險、策略風險、信用風險、交易風險、流動性風險及法規風險。有關涉入風險程度之高低，因扮演角色及承擔責任不同而有差異。金融監理機關除訂定資產證券化業務檢查目標及程序外，並應督促銀行建立適當內部控制及內部稽核功能，同時針對相關會計處理、管理資訊系統、報表填報正確性及資本適足性等議題，詳加瞭解分析，以辨識、衡量、監理及控制上述風險。

二、建議

由於資產證券化業務過程中涵括了金融機構、分析技術、評等機制及資本市場各項目，在推行之初，勢將遭遇許多不同層面的問題。從美國資產證券化業務發展過程、制度及作法將有助於我國推動證券化業務之參考。他山之石，可以攻錯，值此政府推動資產證券化之際，謹就本次研習所得，研提下列意見以供參考：

- (一)特殊目的機構(SPV)為資產證券化成敗之關鍵，必須確保投資人不受創始機構破產或支付不能影響其權益，宜訂定特別規範以隔絕發行機構之破產風險，並以有效控制作為轉讓人是否已放棄被移轉資產之權利為真實出售之判斷標準，以防止道德風險之發生。
- (二)為增加市場接受性，政府可考慮成立類似中小企業信保基金之機構，對符合其發行條件之資產抵押證券，保證其到期兌

付。另實施初期，可開放先由金融同業、法人機構或勞退基金等參與該類證券之投資，透過市場的逐步推廣與各種機制之完備，再進一步開放一般投資人參與。

- (三) 銀行發展資產證券化業務有二項機制要建立，一為標準化之契約，一為必須建立歷史統計資料庫。所謂標準化，就是每家銀行在授信時，均遵守一定標準的規範、格式與流程，建立資產證券化所需之統計資料如違約率、延遲比率、提前付款比率及折現率等，使不同銀行的資產可更容易組合在一起，進行證券化。此一標準化規範可由銀行公會來制訂，並要求各銀行遵守。至於統計資料庫可由聯合徵信中心、不動產鑑價公司或聯合信用卡中心等依不同型態資產負責建立，提供銀行資產證券化業務各種資訊之需求。
- (四) 在證券化過程中，信用評等為不可或缺之成功要素，其評等對象並非企業，而係證券化之資產及交易結構本身。信用評等之介入可建立資產等級與風險分散之觀念，有助於各種投資人選擇不同報酬之資產抵押證券。目前我國信用評等公司僅成立一家，競爭性不足，而一般大眾對信用評等並不很瞭解，政府部門應多推廣信用評等觀念，並積極改善債券市場缺失，擴大其規模，方可創造有利金融資產證券化發展之環境。
- (五) 推動初期可先就公教人員住宅貸款來發展不動產證券化，待市場接受度成熟後，再依序發展金融資產（如信用卡、汽車貸款）及商業資產證券化。
- (六) 資產證券化交易錯綜複雜，涉及之法律規定、稅務制度及會計帳務繁多，專業人才之培養與訓練厥為推動證券化成功之重要關鍵。建議本國銀行推動初期可與國外專業機構合作，

以獲得從事該業務之專門智識 (know-how) 並引進先進之管理資訊系統，作為日後發展資產證券化業務之基礎。

- (七) 推動金融資產證券化為我國當前重要金融改革工作，更是健全我國金融市場的必要項目。美國金融機構監理單位如紐約聯邦準備銀行、財政部金融局及聯邦存款保險公司對資產證券化業務均設有專職人員研究最新發展趨勢及監理需求，並分析其潛在風險，作為檢查人員查核之參考。我國金融監理機關宜因應資產證券化業務之陸續推展，成立類似工作小組，針對資產證券化所衍生之各項議題，詳加研究分析，並對檢查人員實施完整之教育訓練，相信對日後之查核工作必有助益。

附錄 A 美國金融監理機關針對資產證券化業務所發布之參考資料

美國監理機關針對資產證券化業務發布之參考資料主要有：

聯邦準備理事會

(網址：<http://www.federalreserve.gov>)

SR 99-37 Dec, 1999	Risk Management and Valuation of Retained Interests Arising from Securitization Activities
SR 99-32 Nov, 1999	Capital Treatment for Synthetic Collateralized Loan Obligations
SR 99-18 July, 1999	Assessing Capital Adequacy in Relation to Risk at Large Banking Organizations and Others with Complex Risk Profiles
SR 98-25 Sep, 1998	Sound Credit Risk Management and the Use of Internal Credit Risk Ratings at Large Banking Organizations
SR 97-21 July, 1997	Risk Management and Capital Adequacy of Exposures Arising from Secondary Market Credit Activities
SR 96-17 Aug, 1996	Supervisory Guidance for

Credit Derivatives

SR 95-17	March, 1995	Evaluating the Risk Management and Internal Controls of Securities and Derivative Contracts Used in Nontrading Activities
SR 92-11	April, 1992	Asset-Backed Commercial Paper Programs
SR 90-16	May, 1990	Implementation of Examination Guidelines for the Review of Asset Securitization Activities

財政部金融局

(網址：<http://www.occ.treas.gov>)

Advisory 2000-12	Nov, 2000	Risk Management of Outsourcing Technology
Advisory 2000-9	Aug, 2000	Third-Party Risk
Bulletin 2001-34	July, 2001	Investment Securities; Bank Activities and Operations; Leasing
Bulletin 2000-27	Sep, 2000	Risk-Based Capital-Residual Interests
Bulletin 2000-16	May, 2000	Risk Modeling---Model Validation

Bulletin 2000-7 March, 2000 Risk-Based Capital-- Recourse
and Direct Credit Substitutes
Bulletin 1999-46 Dec, 1999 Interagency Guidance on Asset
Securitization Activities—Asset
Securitization

聯邦存款保險公司

(網址：<http://www.fdic.gov>)

FIL 55 June, 2001 Reports of Condition and
Income (Call Report) for
Second Quarter 2001

FIL 7 Jan, 2001 Basel Committee on Banking
Supervision Proposes
Revisions to 1988 Basel
Capital Accord

FIL 65 Sep, 2000 Proposal to Amend the
Regulatory Capital Treatment
of Residual Interests in Asset
Securitizations or Other
Transfers of Financial Assets
Final Rule on the Treatment of
Securitizations and
Participations Following the
FDIC's Appointment as
Conservator or Receiver

FIL 15 March, 2000 Proposed Revisions to the
Risk-Based Capital Treatment

of Recourse Arrangements,
Direct Credit Substitutes, and
Asset Securitizations

儲貸機構監理局

(網址：<http://www.ots.treas.gov>)

Memo 2000-133 Dec, 2000	Risk Management of Technology Outsourcing
Memo 2000-130 Oct, 2000	Underwriting the Purchase of Investment Securities
Bulletin 77 June, 2001	Sound Practices for Liquidity Management at Savings Associations
Bulletin 70 April, 1997	Interagency Statement on Sales of 100% Loan Participations

附錄 B 美國金融監理機關 1999 年 12 月聯合發布之
「資產證券化業務監理指導原則」

Office of the Comptroller of the Currency
Federal Deposit Insurance Corporation
Board of Governors of the Federal Reserve System
Office of Thrift Supervision

INTERAGENCY GUIDANCE ON ASSET SECURITIZATION ACTIVITIES

BACKGROUND AND PURPOSE

Recent examinations have disclosed significant weaknesses in the asset securitization practices of some insured depository institutions. These weaknesses raise concerns about the general level of understanding and controls among institutions that engage in such activities. The most frequently encountered problems stem from: (1) the failure to recognize and hold sufficient capital against explicit and implicit recourse obligations that frequently accompany securitizations, (2) the excessive or inadequately supported valuation of "retained interests,"¹ (3) the liquidity risk associated with over reliance on asset securitization as a funding source, and (4) the absence of adequate independent risk management and audit functions.

The Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, the Board of Governors of the Federal Reserve System, and the Office of Thrift Supervision, hereafter referred to as "the Agencies," are jointly issuing this statement to remind financial institution managers and examiners of the importance of fundamental risk management practices governing asset securitization activities. This guidance supplements existing policy statements and examination procedures issued by the Agencies and emphasizes the specific expectation that any securitization-related retained interest claimed by a financial institution will be supported by documentation of the interest's fair value, utilizing reasonable, conservative valuation assumptions that can be objectively verified. Retained interests that lack such objectively verifiable support or that fail to meet the supervisory standards set forth in this document will be classified as loss and disallowed as assets of the institution for regulatory capital purposes.

The Agencies are reviewing institutions' valuation of retained interests and the concentration of these assets relative to capital. Consistent with existing supervisory authority, the Agencies may, on a case-

¹ In securitizations, a seller typically retains one or more interests in the assets sold. Retained interests represent the right to cash flows and other assets not used to extinguish bondholder obligations and pay credit losses, servicing fees and other trust related fees. For the purposes of this statement, retained interests include over-collateralization, spread accounts, cash collateral accounts, and interest only strips (IO strips). Although servicing assets and liabilities also represent a retained interest of the seller, they are currently determined based on different criteria and have different accounting and risk-based capital requirements. See applicable comments in Statement of Financial Accounting Standard No. 125, "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities" (FAS 125), for additional information about these interests and associated accounting requirements.

retained, and accordingly are not adequately managing the retained portion. It is essential that institutions engaging in securitization activities have appropriate front and back office staffing, internal and external accounting and legal support, audit or independent review coverage, information systems capacity, and oversight mechanisms to execute, record, and administer these transactions correctly.

Additionally, we are concerned about the use of inappropriate valuation and modeling methodologies to determine the initial and ongoing value of retained interests. Accounting rules provide a method to recognize an immediate gain (or loss) on the sale through booking a "retained interest;" however, the carrying value of that interest must be fully documented, based on reasonable assumptions, and regularly analyzed for any subsequent value impairment. The best evidence of fair value is a quoted market price in an active market. In circumstances where quoted market prices are not available, accounting rules allow fair value to be estimated. This estimate must be based on the "best information available in the circumstances."² An estimate of fair value must be supported by reasonable and current assumptions. If a best estimate of fair value is not practicable, the asset is to be recorded at zero in financial and regulatory reports.

History shows that unforeseen market events that affect the discount rate or performance of receivables supporting a retained interest can swiftly and dramatically alter its value. Without appropriate internal controls and independent oversight, an institution that securitizes assets may inappropriately generate "paper profits" or mask actual losses through flawed loss assumptions, inaccurate prepayment rates, and inappropriate discount rates. Liberal and unsubstantiated assumptions can result in material inaccuracies in financial statements, substantial write-downs of retained interests, and, if interests represent an excessive concentration of the institution's capital, the demise of the sponsoring institution.

Recent examinations point to the need for institution managers and directors to ensure that:

- Independent risk management processes are in place to monitor securitization pool performance on an aggregate and individual transaction level. An effective risk management function includes appropriate information systems to monitor securitization activities.
- Conservative valuation assumptions and modeling methodologies are used to establish, evaluate and adjust the carrying value of retained interests on a regular and timely basis.
- Audit or internal review staffs periodically review data integrity, model algorithms, key underlying assumptions, and the appropriateness of the valuation and modeling process for the securitized assets retained by the institution. The findings of such reviews should be reported directly to the board or an appropriate board committee.
- Accurate and timely risk-based capital calculations are maintained, including recognition and reporting of any recourse obligation resulting from securitization activity.
- Internal limits are in place to govern the maximum amount of retained interests as a percentage of total equity capital.

² FAS 125, at par 43

- The institution has a realistic liquidity plan in place in case of market disruptions.

The following sections provide additional guidance relating to these and other critical areas of concern. Institutions that lack effective risk management programs or that maintain exposures in retained interests that warrant supervisory concern may be subject to more frequent supervisory review, more stringent capital requirements, or other supervisory action.

INDEPENDENT RISK MANAGEMENT FUNCTION

Institutions engaged in securitizations should 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 institution's circumstances. A sound asset securitization policy should include or address, at a minimum:

- A written and consistently applied accounting methodology;
- Regulatory reporting requirements;
- Valuation methods, including FAS 125 residual value assumptions, and procedures to formally approve changes to those assumptions;
- Management reporting process; and
- Exposure limits and requirements for both aggregate and individual transaction monitoring.

It is essential that the risk management function monitor origination, collection, and default management practices. This includes regular evaluations of the quality of underwriting, soundness of the appraisal process, effectiveness of collections activities, ability of the default management staff to resolve severely delinquent loans in a timely and efficient manner, and the appropriateness of loss recognition practices. Because the securitization of assets can result in the current recognition of anticipated income, the risk management function should pay particular attention to the types, volumes, and risks of assets being originated, transferred and serviced. Both senior management and the risk management staff must be alert to any pressures on line managers to originate abnormally large volumes or higher risk assets in order to sustain ongoing income needs. Such pressures can lead to a compromise of credit underwriting standards. This may accelerate credit losses in future periods, impair the value of retained interests and potentially lead to funding problems.

The risk management function should also ensure that appropriate management information systems (MIS) exist to monitor securitization activities. Reporting and documentation methods must support the initial valuation of retained interests and ongoing impairment analyses of these assets. Pool performance information has helped well-managed institutions to ensure, on a qualitative basis, 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, MIS reports should 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. Management should ensure that the summaries are distributed to all personnel associated with securitization activities.

Performance reports by portfolio and specific product type - Performance factors include gross portfolio yield, default rates and loss severity, delinquencies, prepayments or payments, and excess spread amounts. The reports should reflect performance of assets, both on an individual pool basis and total managed assets. These reports should segregate specific products and different marketing campaigns.

Vintage analysis for each pool using monthly data - Vintage analysis helps management understand historical performance trends and their implications for future default rates, prepayments, and delinquencies, and therefore retained interest values. Management can use these reports to compare historical performance trends to underwriting standards, including the use of a validated credit scoring model, to ensure loan pricing is consistent with risk levels. Vintage analysis also helps in the comparison of deal performance at periodic intervals and validates retained 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 monthly changes. Management should compare the timing and amount of cash flows received from the trust with those projected as part of the FAS 125 retained interest valuation analysis on a monthly basis. Some master trust structures allow excess cash flow to be shared between series or pools. For revolving asset trusts with this master trust structure, management should perform a cash collection analysis for each master trust structure. These analyses are essential in assessing the actual performance of the portfolio in terms of default and prepayment rates. If cash receipts are less than those assumed in the original valuation of the retained interest, this analysis will provide management and the board with an early warning of possible problems with collections or extension practices, and impairment of the retained interest.

Sensitivity analysis - Measuring the effect of changes in default rates, prepayment or payment rates, and discount rates will assist management in establishing and validating the carrying value of the retained interest. 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, over-collateralization triggers, and early amortization triggers. An increase in defaults can result in higher than expected costs and a delay in cash flows, decreasing the value of the retained interests. Management should periodically quantify and document the potential impact to both earnings and capital, and report the results to the board.

of directors. Management should incorporate this analysis into their overall interest rate risk measurement system³ Examiners will review the analysis conducted by the institution and the volatility associated with retained interests when assessing the Sensitivity to Market Risk component rating

Statement of covenant compliance - Ongoing compliance with deal performance triggers as defined by the pooling and servicing agreements should be affirmed at least monthly Performance triggers include early amortization, spread capture, changes to over-collateralization requirements, and events that would result in servicer removal

VALUATION AND MODELING PROCESSES

The method and key assumptions used to value the retained interests and servicing assets or liabilities must be reasonable and fully documented. The key assumptions in all valuation analyses include prepayment or payment rates, default rates, loss severity factors, and discount rates The Agencies expect institutions to take a logical and conservative approach when developing securitization assumptions and capitalizing future income flows. It is important that management quantifies the assumptions on a pool-by-pool basis and maintains supporting documentation for all changes to the assumptions as part of the valuation process, which should be done no less than quarterly Policies should define the acceptable reasons for changing assumptions and require appropriate management approval.

An exception to this pool-by-pool valuation analysis may be applied to revolving asset trusts if the master trust structure allows excess cash flows to be shared between series In a master trust, each certificate of each series represents an undivided interest in all of the receivables in the trust. Therefore, valuations are appropriate at the master trust level

In order to determine the value of the retained interest at inception, and make appropriate adjustments going forward, the institution must implement a reasonable modeling process to comply with FAS 125 The Agencies expect management to employ reasonable and conservative valuation assumptions and projections, and to maintain verifiable objective documentation of the fair value of the retained interest. Senior management is responsible for ensuring the valuation model accurately reflects the cash flows according to the terms of the securitization's structure For example, the model should account for any cash collateral or over-collateralization triggers, trust fees, and insurance payments if appropriate. The board and management are accountable for the "model builders" possessing the necessary expertise and technical proficiency to perform the modeling process Senior management should ensure that internal controls are in place to provide for the ongoing integrity of MIS associated with securitization activities

As part of the modeling process, the risk management function should ensure that periodic validations

³ Under the Joint Agency Policy Statement on Interest Rate Risk, institutions with a high level of exposure to interest rate risk relative to capital will be directed to take corrective action Savings associations can find OTS guidance on interest rate risk in Thrift Bulletin 13a - Management of Interest Rate Risk, Investment Securities, and Derivative Activities

are performed in order 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 on a pool-by-pool basis. The validation process should be documented to support conclusions. Senior management should ensure the validation process is independent from line management as well as the modeling process. 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.

USE OF OUTSIDE PARTIES

Third parties are often engaged to provide professional guidance and support regarding an institution's securitization activities, transactions, and valuing of retained interests. The use of outside resources does not relieve directors of their oversight responsibility, or senior management of its responsibilities to provide supervision, monitoring, and oversight of securitization activities, and the management of the risks associated with retained interests in particular. Management is expected to have the experience, knowledge, and abilities to discharge its duties and understand the nature and extent of the risks presented by retained interests and the policies and procedures necessary to implement an effective risk management system to control such risks. Management must have a full understanding of the valuation techniques employed, including the basis and reasonableness of underlying assumptions and projections.

INTERNAL CONTROLS

Effective internal controls are essential to an institution's management of the risks associated with securitization. When properly designed and consistently enforced, a sound system of internal controls will help management safeguard the institution'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 their timely detection when they do occur. Internal controls typically (1) limit authorities, (2) safeguard access to and use of records, (3) separate and rotate duties, and (4) ensure both regular and unscheduled reviews, including testing.

The Agencies have established operational and managerial standards for internal control and information systems.⁴ An institution should maintain a system of internal controls appropriate to its size and the nature, scope, and risk of its activities. Institutions that are subject to the requirements of FDIC regulation 12 CFR Part 363 should include an assessment of the effectiveness of internal controls over their asset securitization activities as part of management's report on the overall effectiveness of the system of internal controls over financial reporting. This assessment implicitly includes the internal controls over financial information that is included in regulatory reports.

⁴ Safety and Soundness Standards 12 CFR Part 30 (OCC), 12 CFR Part 570 (OTS)

AUDIT FUNCTION OR INTERNAL REVIEW

It is the responsibility of an institution's board of directors to ensure that its audit staff or independent review function is competent regarding securitization activities. The audit function should perform periodic reviews of securitization activities, including transaction testing and verification, and report all findings to the board or appropriate board committee. The audit function also may be useful to senior management in identifying and measuring risk related to securitization activities. Principal audit targets should include compliance with securitization policies, operating and accounting procedures (FAS 125), and deal covenants, and accuracy of MIS and regulatory reports. The audit function should also confirm that the institution's regulatory reporting process is designed and managed in such a way to facilitate timely and accurate report filing. Furthermore, when a third party services loans, the auditors should perform an independent verification of the existence of the loans to ensure balances reconcile to internal records.

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. Common regulatory reporting errors stemming from securitization activities include:

- Failure to include off-balance sheet assets subject to recourse treatment when calculating risk-based capital ratios;
- Failure to recognize retained interests and retained subordinate security interests as a form of credit enhancement;
- Failure to report loans sold with recourse in the appropriate section of the regulatory report, and
- Over-valuation retained interests.

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, attention should be directed to ensuring that personnel who prepare these reports maintain current knowledge of reporting rules and associated interpretations. This often will require ongoing support by qualified accounting and legal personnel.

Institutions that file the Report of Condition and Income (Call Report) should pay particular attention to the following schedules on the Call Report when institutions are involved in securitization activities: *Schedule RC-F. Other Assets*, *Schedule RC-L. Off Balance Sheet Items*, and *Schedule RC-R. Regulatory Capital*. Institutions that file the Thrift Financial Report (TFR) should pay particular attention to the following TFR schedules: *Schedule CC. Consolidated Commitments and Contingencies*, *Schedule CCR. Consolidated Capital Requirement*, and *Schedule CMR. Consolidated Maturity and Rate*.

Under current regulatory report instructions, when an institution's supervisory agency's interpretation of how generally accepted accounting principles (GAAP) should be applied to a specified event or transaction differs from the institution's interpretation, the supervisory agency may require the institution to reflect the event or transaction in its regulatory reports in accordance with the agency's interpretation and amend previously submitted reports

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. Timely and adequate information on the institution's asset securitization activities should be disclosed. The information contained in the disclosures should be comprehensive, however, the amount of disclosure that is appropriate will depend on the volume of securitizations and complexity of the institution. Well-informed investors, depositors, creditors and other bank 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. Examples of sound disclosures include:

- Accounting policies for measuring retained interests, including a discussion of the impact of key assumptions on the recorded value,
- Process and methodology used to adjust the value of retained interests for changes in key assumptions,
- Risk characteristics, both quantitative and qualitative, of the underlying securitized assets,
- Role of retained interests as credit enhancements to special purpose entities and other securitization vehicles, including a discussion of techniques used for measuring credit risk; and
- Sensitivity analyses or stress testing conducted by the institution showing the effect of changes in key assumptions on the fair value of retained interests.

RISK-BASED CAPITAL FOR RECOURSE AND LOW LEVEL RECOURSE TRANSACTIONS

For regulatory purposes, recourse is generally defined as an arrangement in which an institution retains the risk of credit loss in connection with an asset transfer, if the risk of credit loss exceeds a pro rata share of the institution's claim on the assets⁵. In addition to broad contractual language that may require

⁵ The risk-based capital treatment for sales with recourse can be found at 12 CFR Part 3 Appendix A, Section (3)(b)(1)(iii) {OCC}, 12 CFR Part 567 6(a)(2)(i)(c) {OTS}. For a further explanation of recourse see the glossary entry "Sales of Assets for Risk-Based Capital Purposes" in the instructions for the Call Report

the selling institution to support a securitization, recourse can also arise from retained interests, retained subordinated security interests, the funding of cash collateral accounts, or other forms of credit enhancements that place an institution's earnings and capital at risk. These enhancements should generally be aggregated to determine the extent of an institution's support of securitized assets. Although an asset securitization qualifies for sales treatment under GAAP, the underlying assets may still be subject to regulatory risk-based capital requirements. Assets sold with recourse should generally be risk-weighted as if they had not been sold.

Securitization transactions involving recourse may be eligible for "low level recourse" treatment.⁶ The Agencies' risk-based capital standards provide that the dollar amount of risk-based capital required for assets transferred with recourse should not exceed the maximum dollar amount for which an institution is contractually liable. The "low level recourse" treatment applies to transactions accounted for as sales under GAAP in which an institution contractually limits its recourse exposure to less than the full risk-based capital requirements for the assets transferred. Under the low level recourse principle, the institution holds capital on approximately a dollar-for-dollar basis up to the amount of the aggregate credit enhancements.

Low level recourse transactions should be reported in Schedule RC-R of the Call Report or Schedule CCR of the TFR using either the "direct reduction method" or the "gross-up method" in accordance with the regulatory report instructions.

If an institution does not contractually limit the maximum amount of its recourse obligation, or if the amount of credit enhancement is greater than the risk-based capital requirement that would exist if the assets were not sold, the low level recourse treatment does not apply. Instead, the institution must hold risk-based capital against the securitized assets as if those assets had not been sold.

Finally, as noted earlier, retained interests that lack objectively verifiable support or that fail to meet the supervisory standards set for in this document will be classified as loss and disallowed as assets of the institution for regulatory capital purposes.

INSTITUTION IMPOSED CONCENTRATION LIMITS ON RETAINED INTERESTS

The creation of a retained interest (the debit) typically also results in an offsetting "gain on sale" (the credit) and thus generation of an asset. Institutions that securitize high yielding assets with long durations may create a retained interest asset value that exceeds the risk-based capital charge that would be in place if the institution had not sold the assets (under the existing risk-based capital guidelines, capital is not required for the amount over eight percent of the securitized assets). Serious problems can arise for institutions that distribute contrived earnings only later to be faced with a downward valuation and charge-off of part or all of the retained interests.

⁶ The banking agencies' low level recourse treatment is described in the Federal Register in the following locations: 60 Fed Reg 17986 (April 10, 1995) (OCC), 60 Fed Reg 8177 (February 13, 1995) (FRB), 60 Fed Reg 15858 (March 28, 1995) (FDIC). OTS has had a low level recourse rule in 12 CFR Part 567.6(a)(2)(i)(c) since 1989. A brief explanation is also contained in the instructions for regulatory reporting in section RC-R for the Call Report or schedule CCR for the TFR.

As a basic example, an institution could sell \$100 in subprime home equity loans and book a retained interest of \$20 using liberal "gain on sale" assumptions. Under the current capital rules, the institution is required to hold approximately \$8 in capital. This \$8 is the current capital requirement if the loans were never removed from the balance sheet (eight percent of \$100 = \$8). However, the institution is still exposed to substantially all of the credit risk, plus the additional risk to earnings and capital from the volatility of the retained interest. If the value of the retained interest decreases to \$10 due to inaccurate assumptions or changes in market conditions, the \$8 in capital is insufficient to cover the entire loss.

Normally, the sponsoring institution will eventually receive any excess cash flow remaining from securitizations after investor interests have been met. However, recent experience has shown that retained interests are vulnerable to sudden and sizeable write-downs that can hinder an institution's access to the capital markets, damage its reputation in the market place, and in some cases, threaten its solvency. Accordingly, the Agencies expect an institution's board of directors and management to develop and implement policies that limit the amount of retained interests that may be carried as a percentage of total equity capital, based on the results of their valuation and modeling processes. Well constructed internal limits also serve to lessen the incentive of institution personnel to engage in activities designed to generate near term "paper profits" that may be at the expense of the institution's long term financial position and reputation.

SUMMARY

Asset securitization has proven to be an effective means for institutions to access new and diverse funding sources, manage concentrations, improve financial performance ratios, and effectively serve borrowing customers. However, securitization activities also present unique and sometimes complex risks that require board and senior management attention. Specifically, the initial and ongoing valuation of retained interests associated with securitization, and the limitation of exposure to the volatility represented by these assets, warrant immediate attention by management.

Moreover, as mentioned earlier in this statement, the Agencies are studying various issues relating to securitization practices, including whether restrictions should be imposed that would limit or eliminate the amount of retained interests that qualify as regulatory capital. In the interim, the Agencies will review affected institutions on a case-by-case basis and may require, in appropriate circumstances, that institutions hold additional capital commensurate with their risk exposure. In addition, the Agencies will study, and issue further guidance on, institutions' exposure to implicit recourse obligations and the liquidity risk associated with over reliance on asset securitization as a funding source.

附錄 C 美國商業銀行統一申報報表 - RC-S 報表

Legal Title of Bank

FDIC Certificate Number

35

Schedule RC-S—Securitization and Asset Sale Activities
All of Schedule RC-S is to be completed beginning June 30, 2001

Dollar Amounts in Thousands		(Column A) 1-4 Family Residential Loans			(Column B) Home Equity Lines			(Column C) Credit Card Receivables			(Column D) Auto Loans			(Column E) Other Consumer Loans			(Column F) Commercial and Industrial Loans			(Column G) All Other Loans and All Leases		
Bil	Mil	Thou	Bil	Mil	Thou	Bil	Mil	Thou	Bil	Mil	Thou	Bil	Mil	Thou	Bil	Mil	Thou	Bil	Mil	Thou		
Bank Securitization Activities																						
1 Outstanding principal balance of assets sold and securitized by the reporting bank with servicing retained or with recourse or other seller-provided credit enhancements																						
2 Maximum amount of credit exposure arising from recourse or other seller-provided credit enhancements provided to structures reported in item 1 in the form of																						
a Retained interest-only strips (included in Schedules RC-B or RC-F or in Schedule RC, item 5)																						
b Standby letters of credit, subordinated securities, and other enhancements																						
3 Reporting bank's unused commitments to provide liquidity to structures reported in item 1																						
4 Past due loan amounts included in item 1																						
a 30-89 days past due																						
b 90 days or more past due																						
5 Charge-offs and recoveries on assets sold and securitized with servicing retained or with recourse or other seller-provided credit enhancements (calendar year-to-date)																						
a Charge-offs																						
b Recoveries																						
RCFD B705			RCFD B706			RCFD B707			RCFD B708			RCFD B709			RCFD B710			RCFD B711				
RCFD B712			RCFD B713			RCFD B714			RCFD B715			RCFD B716			RCFD B717			RCFD B718				
RCFD B718			RCFD B720			RCFD B721			RCFD B722			RCFD B723			RCFD B724			RCFD B725				
RCFD B726			RCFD B727			RCFD B728			RCFD B729			RCFD B730			RCFD B731			RCFD B732				
RCFD B733			RCFD B734			RCFD B735			RCFD B736			RCFD B737			RCFD B738			RCFD B739				
RCFD B740			RCFD B741			RCFD B742			RCFD B743			RCFD B744			RCFD B745			RCFD B746				
RIAD B747			RIAD B748			RIAD B749			RIAD B750			RIAD B751			RIAD B752			RIAD B753				
RIAD B754			RIAD B755			RIAD B756			RIAD B757			RIAD B758			RIAD B759			RIAD B760				

5 b

5 a

4 b

4 a

3

2 b

2 a

1

Schedule RC-S—Continued

Dollar Amounts in Thousands	(Column A) 1-4 Family Residential Loans			(Column B) Home Equity Lines			(Column C) Credit Card Receivables			(Column D) Auto Loans			(Column E) Other Consumer Loans			(Column F) Commercial and Industrial Loans			(Column G) All Other Loans and All Leases		
	Bill	Mill	Thou	Bill	Mill	Thou	Bill	Mill	Thou	Bill	Mill	Thou	Bill	Mill	Thou	Bill	Mill	Thou	Bill	Mill	Thou
6 Amount of ownership (or seller's) interests carried as a Securities (included in Schedule RC-B or in Schedule RC, Item 5) b Loans (included in Schedule RC-C)	RCFD B761																				
	RCFD B500																				
	RCFD B762																				
	RCFD B501																				
	RCFD B764																				
	RCFD B765																				
	RCFD B766																				
	RCFD B768																				
	RCFD B770																				
	RCFD B771																				
7 Past due loan amounts included in interests reported in item 6 a a 30-89 days past due b 90 days or more past due	RCFD B772																				
	RCFD B773																				
	RCFD B774																				
8 Charge-offs and recoveries on loan amounts included in interests reported in item 6 a (calendar year-to-date) a Charge-offs b Recoveries	RCFD B775																				
	RCFD B776																				
9 Maximum amount of credit exposure arising from credit enhancements provided by the reporting bank to other institutions' securitization structures in the form of standby letters of credit, purchased subordinated securities, and other enhancements	RCFD B777																				
	RCFD B778																				
10 Reporting bank's unused commitments to provide liquidity to other institutions' securitization structures	RCFD B779																				
	RCFD B780																				
RCFD B781																					
RCFD B782																					
RCFD B783																					
RCFD B784																					
RCFD B785																					
RCFD B786																					
RCFD B787																					
RCFD B788																					
RCFD B789																					

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ABS 2000 Review and 2001 Outlook: \$230 Billion of Issuance Expected in 2001 As Market Braces for Slower Economic Growth

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- 2001 Outlook: ABS Market Braces for Slower Economic Growth
- 2000 Review: Robust ABS Issuance Led by Vehicles
- Conclusion: Bright Prospects for 2001

2000 REVIEW AND 2001 OUTLOOK

Moody's annual survey of active asset-backed securities (ABS) issuers indicates that U.S. ABS term public issuance will likely total \$230 billion in 2001, which represents a 10% increase over 2000.¹ This growth rate compares to a 6% increase in 2000 and a 4% rate of growth in 1999. Growth in 2001 will likely be led by credit card receivables, which we project to increase by 24%, and stranded utility cost transactions. Projected growth in credit cards is based primarily on the refinancing of newly amortized securitizations while stranded utility cost issuance should increase as legal challenges to utility legislation are resolved.

We expect vehicles will remain the largest ABS asset class in 2001 followed by home equities and credit cards. Led by strong captive issuance, vehicles overtook home equities as the largest asset class in 2000 with a 33% increase in issuance over 1999. Volume in the home equity sector—the dominant asset class from 1997 through 1999—was down in 2000 due to weak industry profitability and a resulting move toward lender consolidation. Credit card issuance should be strong in 2001 following a robust 23% expansion in 2000 over 1999.

At the start of 2001, the focus of the ABS market is on the economy and on the impact of slower economic growth on issuance, credit, and liquidity. The slower economic growth is due to higher interest rates and energy prices, and falling stock prices. Most economists are forecasting a "soft landing" for the economy in 2001, with the caveat that the likelihood of a recession is greater than in previous years.

A "soft landing" would likely not have a major effect on the ABS market. However, more distressed economic conditions would have numerous impacts on the ABS market: (1) spreads and liquidity of subordinate tranches would likely be adversely impacted as investors flee to higher credit quality issues, (2) prime auto issuance would be lower in an economic downturn as fewer new vehicles are sold; however, more used vehicle sales could boost subprime issuance, (3) while a "soft landing"

¹ Issuance volumes include only public U.S. deals sold in the U.S. Excluded from issuance totals are money market tranches, 144A offerings, privately placed subordinate pieces of public deals, and repackaged or re-securitization deals. Money market tranche volume in 2000 was \$10.7 billion and \$9.9 billion in 1999.



Moody's Investors Service

January 12, 2001

for the economy would likely not have a major impact on the credit quality of securitized pools, a more distressed economy should lead to sharply higher delinquencies and losses for some securitized pools, particularly subprime auto and subprime mortgage-related pools, and (4) if a "credit crunch" ensues, investors could be exposed to headline risk as thinly capitalized lenders run out of funding alternatives

2000 ABS highlights include

- Credit quality for major consumer assets remained mostly favorable in 2000. The performance of securitized credit card pools continued to improve in 2000; however, in the latter half of the year, the rate of improvement in performance as measured by Moody's Credit Card Index slowed. For prime autos, credit quality generally improved in 2000 with Moody's prime auto loss and delinquency indexes declining to historically low levels. Credit quality in the subprime auto sector was generally positive
- Although credit quality was generally stable, ratings actions affected securitizations sponsored by Toyota, ContiMortgage, Heilig-Meyers, and a number of manufactured housing transactions. The franchise loan sector experienced a difficult year with substantial deterioration in the credit quality of some securities issued by Franchise Mortgage Acceptance Corporation (FMAC) and Global Franchise Trust.
- The landscape of the ABS market changed substantially in 2000 as several industry leaders either shut down or downsized. As a result of weak industry profitability and a resulting move toward consolidation, mortgage-related lenders Conseco Finance Corp., The Money Store, ContiFinancial, and Associates First Capital announced plans to downsize or discontinue segments of their mortgage-related operations. In addition, Bay View Capital Corporation shut down the origination activities of franchise lending pioneer FMAC. FMAC joined The Money Store (acquired by First Union) and Green Tree (acquired Conseco) as recent high profile acquisitions that turned sour.

2001 OUTLOOK: ABS MARKET BRACES FOR SLOWER ECONOMIC GROWTH

At the start of 2001, the focus of the U.S. ABS market is on the economy and on the impact of slower growth on issuance, credit, and liquidity. Estimates of 2001 real GDP growth by economists surveyed by Blue Chip Economic Indicators call for a 2.6% expansion in 2001, the smallest increase since 1991 and down substantially from 2000 GDP growth of approximately 5%. A similar survey published in the *Wall Street Journal* projects 2001 growth of approximately 2.5%.² Although most forecasts call for a "soft landing" in the economy in 2001, the likelihood of a recession is greater than in previous years. The slower growth in the second half of 2000 and the projected slowdown in 2001 are a result of higher interest rates and energy prices that began in 1999 and continued into 2000, and falling stock prices in 2000.

Although 2001 projected economic growth is lower relative to recent years, a "soft landing" would likely not have a dramatic impact on the ABS market; after all, projected 2001 economic growth is not substantially lower than the post-World War II U.S. average annual growth of 3.1% and in line with the 2.7% increase experienced in 1993 and 1995. However, more distressed conditions could impact the ABS market in the following ways:

- Subordinate tranches could experience wider spreads and less liquidity as investors pursue higher credit quality issues in a flight to quality. Subordinate classes suffered from a similar fate during global bond market turmoil following the Russian default in the summer of 1998.
- Prime auto issuance would be adversely impacted as fewer new vehicles are sold; however, more used vehicle sales could boost subprime issuance.
- Credit quality would not suffer substantially as a result of a "soft landing" for the economy. However, a more serious economic downturn would lead to higher delinquencies and losses, particularly for subprime pools in the auto and mortgage sectors, where cash-strapped borrowers are prevalent.

² *Wall Street Journal*, January 2, 2001, p. 2

- If a "credit crunch" ensues, investors could be exposed to headline risk as thinly capitalized lenders run out of funding alternatives

Robust \$230 Billion of U.S. ABS Issuance Projected in 2001

Issuers expect volume of \$230 billion in 2001, representing approximately 10% growth over 2000 (See Figure 1) The growth in issuance should be driven by credit cards and stranded utility costs. The projected credit card issuance gain is due to refinancing of newly amortized securitizations, with approximately \$36 billion of credit card deals expected to mature in 2001. Stranded utility cost issuance should increase over moribund 2000 levels as utilities around the country resolve legal challenges to legislation and rate orders that authorize the bond issuance and tariffs. Issuance in 2001 for other asset classes is expected to remain at or near 2000 levels. Figure 2 shows the breakdown of issuance by asset class over time.

Active Year Ahead for Vehicles

Moody's projects that public vehicle-backed securities issuance in 2001 will stay essentially flat, amounting to an active \$70 billion versus 2000's record volume of \$68 billion.³ Prime auto issuance will again be the mainstay of this sector. Big Three captive (Ford, GM, and DaimlerChrysler) issuance is expected to remain active in 2001 along with Japanese captives. Some new bank issuers will also appear on the scene.

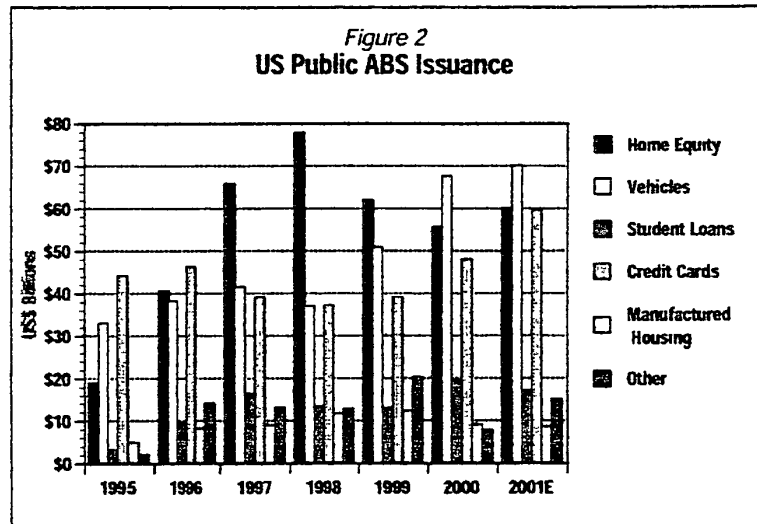
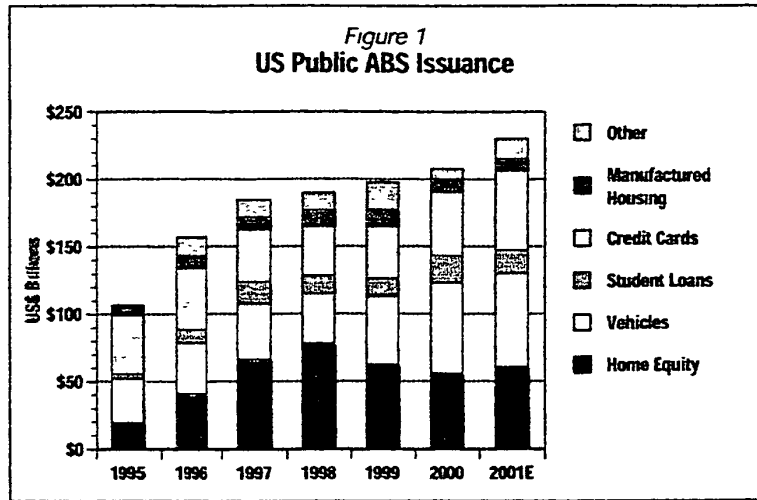
Mortgage-Related Sector: Stable Volume in 2001

Home equity volume is projected to increase modestly in 2001 over 2000 driven by refinancing activity, as hybrid ARMs originated in 1997 through 1999 reach their reset dates, prompting borrowers to refinance.⁴ Moreover, lower interest rates should have a modest positive impact on refinancing activity. Manufactured housing issuance should be flat in 2001 over 2000.

Home Equity Loan Issuer Composition Unchanged in 2001

The composition of the top home equity issuers is unlikely to change dramatically in 2001 as it did in 1999 and 1998. RFC, Lehman and Countywide should continue to dominate the market, while CSFB/DJ is expected to increase market share.

³ Vehicle-backed securities include securities backed by automobile loans (prime and subprime), automobile leases, floorplan loans, and loans secured by recreational vehicles, motorcycle, marine, truck and agricultural/construction equipment.
⁴ The home equity mortgage category includes the following types of loans: subprime or "B&C" mortgages regardless of lien status, traditional second mortgage loans, home improvement loans (HILs), high-LTV loans (125% LTV loans), and home equity lines of credit (HELOCs).



The consolidation that has been underway for the last several years, as well as the shakeout of financially weaker players, should continue in 2001, but the end of the consolidation cycle is near. The result is likely to be a more stable environment and a reduction in servicing disruptions and headline risk experienced in recent years.

Reasons for Optimism for Manufactured Housing

Notwithstanding the difficulties of the past year, Moody's remains cautiously optimistic about the prospects for the manufactured housing industry in 2001. The main reasons:

- Manufactured housing lenders appear likely to continue to emphasize quality over quantity in their loan originations, even at the cost of reduced origination and securitization volume.
- Reduced production and shipments of new manufactured housing units will help to work off the inventory glut that currently afflicts the industry, though getting sales and inventory back into balance may take a few more years.
- Tighter underwriting practices and better risk-based pricing should enable newer manufactured housing deals to show improved credit performance.
- The winnowing of the manufactured housing field has diminished competitive pressures, rendering unlikely a return to past excesses. Moreover, given the difficult experiences of many manufactured housing participants (and former participants), it does not appear that any new company intends to enter the market as a significant player.
- Through product improvements and the industry's largely successful efforts to burnish its public image, this sector has firmly established the manufactured home as an alternative, desirable form of affordable housing, thus ensuring an ongoing demand for the sector's products.

Credit Cards: \$60 Billion of Issuance Expected

Bank and retail credit card issuance is expected to increase to \$60 billion in 2001, up 24% from \$48 billion in 2000. Much of the issuance estimated for 2001 is attributable to the expected refinancing of newly amortized securitizations.

Issuers Likely to Adopt Citi-Like Note Structure

Citigroup introduced a new note structure in 2000 that is likely to be adopted by other issuers in 2001.⁵ To date, the vast majority of credit card ABS has been issued as pass-through certificates from master trusts. To expand their investor base and increase issuing flexibility, several issuers have been moving toward issuing credit card ABS as notes from corporate-like entities.

The change from certificates to notes is motivated by a desire to improve execution by (1) expanding the issuer's investor base, and (2) enabling the issuer to take advantage of short-term market conditions more quickly. However, the new structure is likely to appeal to only the largest and most frequent issuers because the ability to issue in relatively large quantities is necessary to maximize the advantages of the new structure.

Consolidations Will Continue

We expect portfolio acquisitions by active, financially healthy credit card ABS issuers to continue in 2001 as more lenders withdraw from various market segments, either because of lack of strategic business fit or an inability to achieve sufficient scale in an increasingly competitive market. Lower profitability for the credit card sector will continue to pressure smaller issuers that compete directly with the large banks to exit the credit card business altogether.

While consolidation has helped the financial stability of many larger credit card issuers, it also means that many of those issuers have wider access to the capital markets and are less dependent on term securitizations for their funding needs. Such issuers may be expected to avoid the market if spreads widen or if they do not see a cost advantage in issuing term ABS. Originators may instead fund on-balance-sheet, through commercial paper, or issue securities in international markets.

⁵ For more detail on the new structure see "Note to Investors: Credit Card-Backed Securities Are Changing Color," *Moody's Investors Service*, September 22, 2000.

Lower Student Loan Issuance Projected in 2001; Stranded Utility Costs Active

Based on issuer estimates, the volume of student loan backed securities will likely decline to approximately \$18 billion from issuance of \$21 billion in 2000. Leading the way will be Sallie Mae, Keycorp, and other for-profit issuers, although with smaller issuance amounts than in 2000

Stranded utility cost securitizations were held back in 2000 due to legislative delays. With many of the political issues resolved in 2001, we expect \$10 billion of issuance that includes utilities from Connecticut, Michigan, New Jersey, and possibly Texas.

2000 REVIEW: ROBUST ABS ISSUANCE LED BY VEHICLES

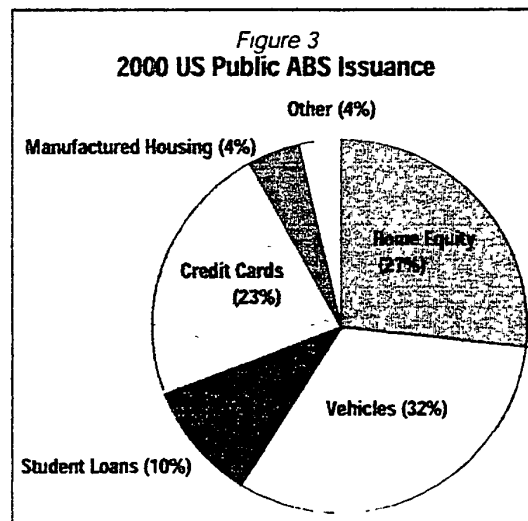
U.S. public ABS issuance got off to a slow start in 2000 as first quarter 2000 volume — at \$41 billion — was down 15% relative to 1999. Fixed income market volatility and heightened spreads kept some issuers on the sidelines in the first quarter of 2000, particularly financially strong companies with numerous ABS funding alternatives. Problems in the fixed income market were caused by several Federal Reserve Bank rate hikes and resulting uncertainty regarding future Fed actions; volatility in the swap market, and an inverted yield curve.

However, despite continuing market jitters, ABS market volume roared back in the second quarter of 2000, with issuance of approximately \$62 billion, compared with \$53 billion issued in the second quarter of 1999. Solid issuance of \$52 billion and \$54 billion in the third and fourth quarters of 2000, respectively, established 2000 as a record issuance year in the ABS market. The 2000 issuance of \$209 billion was 6% greater than 1999's \$197.4 billion and 10% more than the 1998 total of \$189.5 billion.

Mortgage-related (home equity loans and manufactured housing) issuance was down 13% in 2000 to \$65 billion. The decrease was due to weak industry profitability and a resulting move toward consolidation as companies such as Conseco Finance Corp., The Money Store, ContiFinancial, and Associates First Capital announced plans to downsize, discontinue, or merge with other lenders. Excluding the mortgage related sectors, ABS issuance was \$145 billion in 2000, up 17% from 1999 and up 44% from 1998.

Non-mortgage ABS issuance was fueled by vehicles and credit cards, which were up 33% and 23%, respectively, over 1999. Vehicle volume surged to \$68 billion in 2000, with the prime auto component of the vehicle class up 79% in 2000 over 1999, driven by dramatically higher captive volume.

The surge in vehicle volume displaced home equities as the largest ABS class, a distinction held by home equities since 1997. As illustrated in *Figure 3*, vehicles comprised 32% of the ABS market in 2000, followed by home equities (27%), credit cards (23%), student loans (10%), manufactured housing (4%) and the "other" category consisting of equipment leasing and stranded utility costs (4%).



Vehicles Run on All Cylinders in 2000

A combination of record new vehicle sales and better execution in the ABS market relative to the corporate bond market propelled prime auto issuance in 2000 to record levels. The main segments of the vehicle-backed market contributing to the issuance increase, in order of magnitude, were prime autos, subprime, floorplans, agricultural/industrial equipment, auto leases, and a mixture of other assets (heavy trucks and motorcycles). Prime auto loan-backed paper contributed 61% of total vehicle-backed volume, for a total of \$43 billion.

Total prime issuance in 2000 by the Big Three captives amounted to \$26 billion, a sizeable increase over the 1999 and 1998 figures of \$15 billion and \$11 billion, respectively. Ford Motor Credit Company, which has been the largest auto issuer by public volume since 1997, issued seven transactions totaling \$16 billion in 2000, followed by Chrysler Financial Company L.L.C., a subsidiary of the DaimlerChrysler Corporation, with five transactions totaling \$7.5 billion, and General Motors Acceptance Corporation, with two transactions totaling \$2.2 billion. The Japanese captive finance companies also increased public issuance substantially in 2000, issuing \$7 billion relative to \$2.7 billion in 1999, and surpassing their previous record of \$5.8 billion in 1997.

In the subprime sector, the number of public deals fell again with 22 transactions rated in 2000 relative to 25 in 1999 after two consecutive years of steeper declines. 31 deals were rated by Moody's in 1998 and a record 41 deals in 1997. Interestingly, while the number of deals closed in 2000 represented only 54% of the number of deals closed in 1997, the issuance volume was 14% higher in 2000, pointing to the strength of the survivors of the industry shakeout. Therefore, the increased issuance volume, along with the reduced number of deals, is merely a reflection of fewer players closing fewer but larger deals.

Mortgage-Related Issuance Declined in 2000

Home equity issuance was \$5.6 billion, down approximately 10% from 1999, while manufactured housing issuance was \$9 billion, down 27% over 1999.

As in the previous three years, subprime (B&C) issuance was the largest contributor to home equity loan securitization volume in 2000, accounting for over 85% of total home equity dollar volume in 2000 compared to approximately 83%, 84% and 80% in 1999, 1998 and 1997, respectively.

2000 saw continued consolidation in the home equity and manufactured housing markets as several players entered into strategic alliances, exited the market, filed for bankruptcy, or downsized. For example:

- First Union discontinued The Money Store home equity loan originations, but maintained its home equity loan servicing and portfolio management operations. First Union purchased the Money Store in 1998.
- Historically active issuer ContiFinancial filed for Chapter 11 bankruptcy protection.
- Associates First Capital discontinued its manufactured housing lending operations. However, Associates currently continues to service loans from its center in Knoxville, Tennessee. Associates had been the third largest manufactured housing lender and had been active in the securitization market. In an unrelated matter, Citigroup acquired Associates later in the year.
- In March 2000, Conseco Inc. announced its intentions to sell Conseco Finance Corp (formerly Green Tree Finance, which it had purchased in 1998, during the growth phase of the lending cycle). However, no sale occurred in 2000; instead Conseco concentrated on improving profitability by focusing on increasing efficiency and reducing the cost of its operations.
- Advanta Corp. announced in 2000 that it was exploring alternatives such as partnerships or outright sales of its mortgage and leasing businesses. In January 2001, J.P. Morgan Chase announced that its Chase Manhattan Mortgage Corp. subsidiary agreed to buy the mortgage business of Advanta Corp.

More Concentration in Home Equity Sector

As in previous years, the top five issuers constituted a large portion of the home equity securitization market. In 2000, the largest five securitizers accounted for 37.7% of volume as opposed to 36.1% in 1999. The consolidation trend is more obvious when considering the largest 10 issuers. In 2000, the top ten issuers were responsible for 66% of total dollar issuance relative to 55% in 1999.

The mix of issuers also shifted in 2000. Lehman Brothers, absent from the top ten in 1999, moved into second place while Alliance Funding, Advanta, and Equicredit dropped out of the ranks of top issuers. RFC continued as the leading lender in the market, increasing its market share to 15% from 11.5% in 1999.

Manufactured Housing Issuance Declines in 2000

The year 2000 saw securitization volume in the manufactured housing finance industry decline for the first time in seven years, as manufactured housing lenders, concerned about the deteriorating performance of outstanding deals, upgraded their underwriting standards and began making loans to better-credit-quality borrowers. Greater selectivity in lending, however, led to a dramatic drop in sales of manufactured housing units and a spike in inventories of new units.

This inventory build-up, combined with the subsequent rise in cumulative repossessions in manufactured housing deals, caused an overall inventory glut that cut into both industry profits and pricing, reduced the production and shipment of new units, and dramatically affected loss severities and, consequently, the performance of securitized manufactured housing transactions.

Credit Card ABS Issuance Up Sharply

U.S.-dollar bank and retail credit card securitization volume was \$48 billion in 2000, up 23% from \$39 billion in 1999, topping prior peak issuance levels set in 1995 and 1996. With \$8.3 billion in public issuance, MBNA led all issuers with 20% of total bank credit card volume in 2000. In second place was Discover, with \$7.0 billion (16%), and in third place was Citigroup, with \$6.8 billion (14%). Rounding out the top five were Capital One, with \$4.4 billion (10.3%), and American Express, with \$3.6 billion (8.5%). Notably absent from 2000 top issuance standings was Bank One/First USA, who took time out to regroup senior management and tend to customer relations issues that arose in 1999. Bank One/First USA is expected to return to the ABS market in 2001.

Consolidation Continues, but Pace Slows

MBNA and Citigroup were the most active in portfolio acquisitions in 2000. In November 2000, Citigroup purchased Associates First Capital Corporation, thus acquiring both bankcard and retail card portfolios totaling \$11 billion. Similarly, MBNA made a grab for more market share by purchasing a \$5.3 billion bankcard portfolio from First Union Bank. The top ten bankcard issuers now comprise about 79% of total managed receivables, and the top three comprise 44%.

Citi's New Structure Sets the Standard

An interesting development in the credit card securitization market in 2000 was the first issuance from Citigroup's new Credit Card Issuance Trust. This Trust issued three classes of notes backed by a participation certificate issued from Citigroup's master credit card trust. Moody's rated the Class A, Class B, and Class C notes **Aaa**, **A2**, and **Baa2**, respectively. Citigroup expects all future issuance of its credit card-backed ABS to be issued as notes from the new issuance trust rather than as certificates from its master trust.

With this structure, Citigroup hopes to open up new funding sources. Pension funds will be able to purchase the now ERISA-eligible Class B and Class C notes much more easily than Class B or Class C certificates. In addition, the new Issuance Trust has MTN-like flexibility to issue large blocks of subordinate notes, attracting investors that were unable or not interested in buying the traditional, smaller sized subordinate certificates. Using this trust, Citigroup returned to the market in September 2000 with its first deal since November 1999 and expects to be more active in the securitization market in the near future.

Sallie Mae Active; Stranded Utility Cost Issuance Low

Student loan transactions experienced a 65% volume increase in public term securitizations in 2000 compared with 1999, going from \$13 billion to \$21 billion. The increase in volume was mainly due to the presence of Sallie Mae, with four transactions for \$8.7 billion. Also in the market was USA Group Secondary Market Services (two deals for \$2.4 billion), Keycorp (two deals totaling \$1.2 billion), as well as Nelnet with \$1.0 billion.

Stranded utility cost issuance was only \$1 billion in 2000 due to legal challenges to utility legislation and rate orders that allow stranded cost bond issuance. To date, stranded cost issuance has been below expectations due to legislative and regulatory delays.

Credit Quality Generally Stable in 2000

Credit quality for major consumer assets remained mostly favorable in 2000. The performance of securitized credit card pools continued to improve in 2000; however, in the latter half of the year, the rate of improvement in performance as measured by Moody's Credit Card Index slowed. For prime autos, credit quality generally improved in 2000 with Moody's prime auto loss and delinquency indexes declining to historically low levels. Credit quality for the subprime auto sector was generally positive.

Although credit quality was generally stable in 2000, there were bumps in the road:

- Moody's placed 11 classes of securities in four Toyota auto lease securitizations on review for possible downgrade as a result of higher than expected residual value losses in Toyota's auto lease portfolio. The ratings of the 11 securities were confirmed after Toyota Motor Credit Corporation decided to make a cash deposit into reserve accounts in each of the four transactions to address the higher than expected losses.
- Based on poor pool performance and reduced overcollateralization support, Moody's downgraded six subordinate classes from three 1997 securitizations of subprime residential mortgages originated by ContiMortgage. Five of the six classes were downgraded to **Caa2** or lower.
- In August 2000, six classes of securities issued by Heilig-Meyers Master Trust were placed on review for possible downgrade. The rating action followed the filing of a Chapter 11 voluntary petition by Heilig-Meyers Company.
- The franchise loan sector experienced a particularly rocky year as transactions sponsored by Deutsche Bank and FMAC ran aground, primarily due to defaulted "business value" loans. FMAC securitizations have generally performed significantly below expectations. Moreover, some subordinate classes issued in the FMAC 1996-B transaction, not rated by Moody's, missed an interest payment. Securities issued in the Deutsche Bank sponsored Global Franchise Trust 1998-1 were downgraded from **Aa2** to **A3**, **A2** to **Ba2**, and **Baa3** to **B2** due to the default of a large business value loan.

CONCLUSION: BRIGHT PROSPECTS FOR 2001

At the start of 2001, prospects for the U.S. ABS market are bright. ABS issuance in 2001 should be robust, led by credit cards and stranded utility costs. Vehicles should remain as the largest asset class. However, a slowing economy could cause problems for the market, with a flight to quality and resulting widening spreads for subordinate classes, enhanced headline risk due to a credit crunch, and deteriorating credit performance.

Doc ID# SF9739

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