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ASSET-BACKED SECURITIES (ABSs)

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Panelists: ROBERT J. GROSSMAN*
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Recorder: DAVID A. HALL

- o Types of assets securitized
 - Credit card receivables
 - Auto loans
 - Other
- o Structural features
- o Risk profile
 - Cash-flow variability
 - Credit risk (default)
- o Applicability for insurance companies

MR. DAVID A. HALL: The 1980s have seen some evolutionary, if not revolutionary, developments on Wall Street. Among the contributors to these changes were the advances in technology and the penetration of financial leverage. Relevant to this subject, computing power enabled the development, analysis and administration of a variety of types of pass-through securities. Consumer lenders were afforded a quantum increase in funding sources, enabling them to exponentially leverage the fee income of their servicing operations without simultaneously bloating their balance sheets. With 20/20 hindsight, the birth of Government National Mortgage Association (GNMA) mortgage pass-through certificates in the 1970s now looks like a pebble which was tossed into the center of a placid fixed-income sea, the ripples from which have now propagated into tidal waves of securitization vehicles rolling and crashing into the 1990s. An overblown metaphor? Perhaps. But the mere presence of this topic underscores the pervasiveness of this exploding market.

We're most fortunate and privileged to welcome three distinguished experts to our podium. Notably, none of these gentlemen is an actuary, which was not specifically an objective of mine when I set out to recruit a blue ribbon panel. Perhaps more

- * Mr. Grossman, not a member of the sponsoring organizations, is Senior Vice President of Fitch Investors Service, Inc. in New York, New York.
- ** Mr. Parseghian, not a member of the sponsoring organizations, is Managing Director, Fixed Income Research of First Boston Corporation in New York, New York.
- *** Mr. Richey, not a member of the sponsoring organizations, is Senior Assistant of New England Asset Managing in Farmington, Connecticut.

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importantly, none of these three comes from an insurer, and thus, none of them should have any competitive secrets to protect.

As an overview to this session, our first speaker will provide some general background and a summary of the structural features of several common forms of ABSs. Our second guest will address the credit risk aspects of the market. Our final speaker will approach the market from an end-investor's perspective.

The first speaker is Greg Parseghian. Greg is a Managing Director in the Fixed Income Research department of the First Boston Corporation. He manages the Market Research and Portfolio Strategies groups. Market Research publishes frequent research reports highlighting relative value opportunities in domestic and foreign fixed income markets. The breadth of the sectors covered includes government, agency, corporate, mortgage, and derivative products. Portfolio Strategies provides portfolio restructuring and advisory services to thrift, bank, insurance, mutual fund, pension, and performance-based investors. Proposals take into account the tax, accounting, regulatory, and economic environment unique to each customer and industry. Greg received both his Bachelor of Science in Economics and MBA in Finance from the Wharton School at the University of Pennsylvania. Prior to joining First Boston, Greg worked in the pension consulting field and did economic research for the Federal Reserve Bank.

MR. GREGORY J. PARSEGHIAN: ABSs are a simple subject. What I'm going to do in the overview is to present how they are structured and how people use them, and to discuss some of the return characteristics.

Consumer installment credit represents the majority of the collateral for asset-backed securities. The two types of ABSs that are most common are auto loans and credit card receivables. I think that the first thing we should say is that out of all the financial innovations in the 1980s that came out of Wall Street, the ones that have been most successful from the standpoint of the investor are ABSs. They yield a substantial margin above Treasuries and enjoy high credit quality. In addition, there have been no surprises with this product, unlike many of the other ideas which have sprung from the financial geniuses of Wall Street. The reason that the ABS market has enjoyed such success, rising to well over \$30 billion outstanding at this point, is that this market makes sense for both the issuer and the investor. I will discuss why you find motivated issuers of this product, and why investors have found them to be a source of excellent returns while enjoying high credit quality as well.

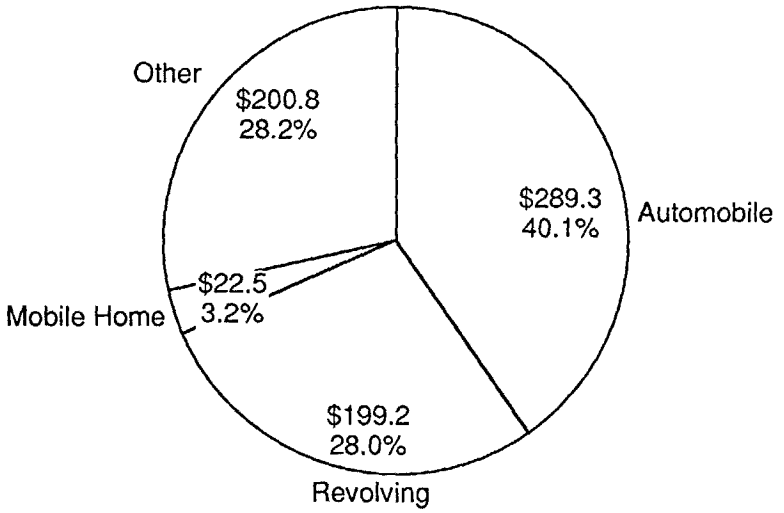
Today there exists about \$700 billion of consumer installment credit (see Chart 1). Most of this, of course, would not be suitable to serve as collateral. What is needed is collateral which is fairly homogeneous so that you can have predictable prepayment and cash flow characteristics. Auto loans and revolving charge accounts tend to have similarities among the different loans, as well as the aggregate credit quality that enables securitization, although obviously none of these credits are individually of AAA quality. For example, my credit card balance isn't something that you would want to buy as a AAA security, but when you put a lot of these balances together and add various credit enhancements, we can get them to be high-rated securities.

ASSET-BACKED SECURITIES

CHART 1

TOTAL CONSUMER INSTALLMENT CREDIT

Total: \$711.8 billion



Source: Federal Reserve as of December 1989

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ABS issuance has grown fairly dramatically since starting in 1985 (see Chart 2). More recently, 1989 issuance was about \$21 billion, and we anticipate that 1990 ABS issuance will be about \$30 billion. The vast majority are either AA or AAA rated. In general, ABSs offer 70-100 basis points of yield advantage relative to Treasuries. Given that they also have good convexity characteristics, that can also be translated into an expected return advantage of 70-100 basis points over Treasuries.

So far, auto loan ABSs have comprised a little bit over half of total issuance. Credit cards make up most of the balance. The remainder includes mobile home mortgages, computer leases, recreational vehicle (RV) loans, boat loans, and just about anything else you might imagine. Theoretically, nothing is outside of the realm of possibilities, and I think that my remarks will begin to point out the vast potential for this market.

The picture of what's outstanding today looks a bit different. Credit cards predominate. About 57% of the outstanding issues are credit card backed. Another 35% are auto loans. The reason that these categories reverse between issuances versus outstanding balances is that auto loans pay down relatively quickly, as both principal and interest are paid each month, whereas the credit card balances represent revolving charges (without principal paydowns) for a period of time, so that most of what was originally issued remains outstanding.

Why do issuers want to issue these? Why, for example, does Citicorp frequently issue credit card securities at wider yield spreads than it could issue straight debentures? It makes no sense, seemingly. Citicorp is issuing higher rated securities at wider yield spreads (over Treasuries) than its own direct debt would require. Why does it do this? Why does Ford Motor Credit do the same thing? Why does GMAC do it? And why do investors charge issuers more for (in many cases) a higher rated security? I don't know what Bob's viewpoint is, but many people believe that ABSs have inherently better credit quality than debentures of the same issuer. For example, given a choice between a GMAC asset-backed security or a GMAC straight corporate debenture, many investors would prefer the GMAC ABS. The situation would be similar with Citicorp paper. Many people would prefer Citicorp ABSs to Citicorp holding company debentures. In spite of this, we have a situation where, in many cases, the ABSs still yield more. They are also harder to structure and issue. Why does any issuer do it?

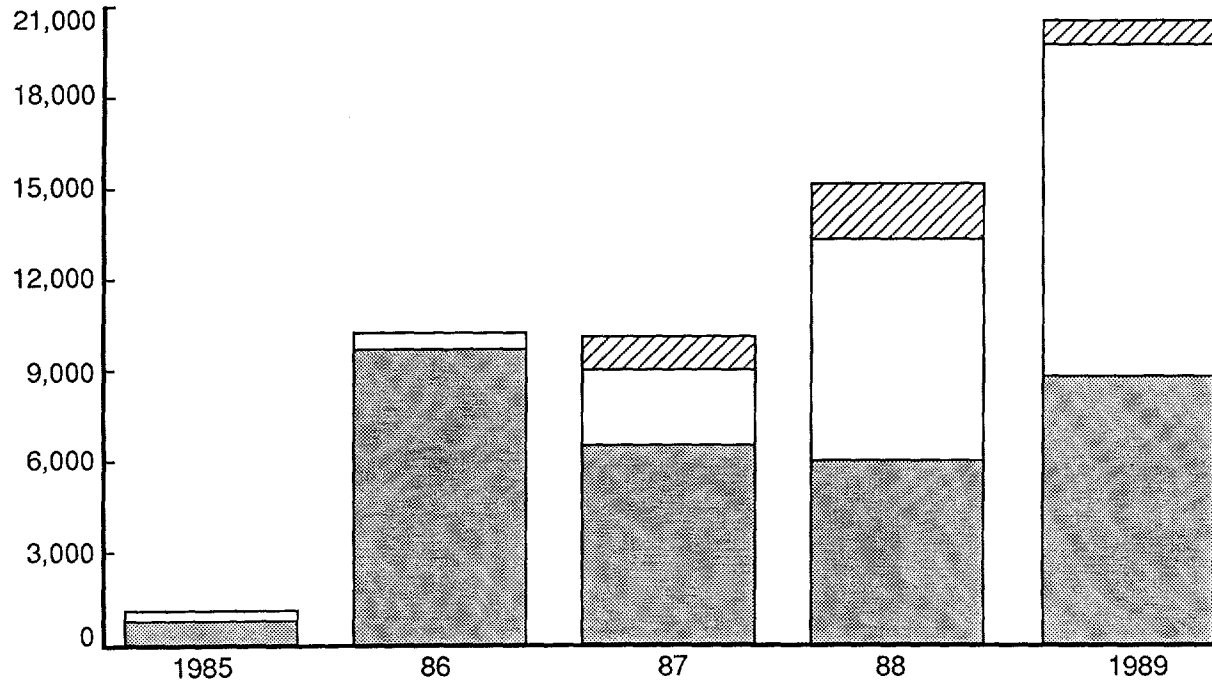
There are a couple of reasons. One relates to banks. Banks are the fastest growing issuer of asset-backed securities. The overriding reason is in response to banks' risk adjusted capital guidelines. If you are a bank and you issue a debenture to finance your auto loan or credit card receivable portfolio, you find that you have to hold quite a bit of associated equity capital, and even more will be required as the risk capital guidelines get fully phased-in. Credit cards and auto loans are 100% risk-weighted assets. However, if you were to issue an ABS, you could get sale (accounting) treatment, thereby removing these loans from your balance sheet. You could then use the proceeds to invest in lower risk-weighted items, such as GNMA's or Federal Home Loan Mortgage Corporation (FHLMC), or short collateralized mortgage obligations (CMOs). CMOs, for example, have a 20% risk weight, meaning that, if you were to do a transaction where you sold an ABS, removed credit card receivables or auto loans from your balance sheet,

ABS ISSUANCE

Total: 56.1billion



\$ Millions



As of December 31, 1989

ASSET-BACKED SECURITIES
CHART 2

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and replaced them with CMOs, you would be able to conserve 80% of the required equity capital.

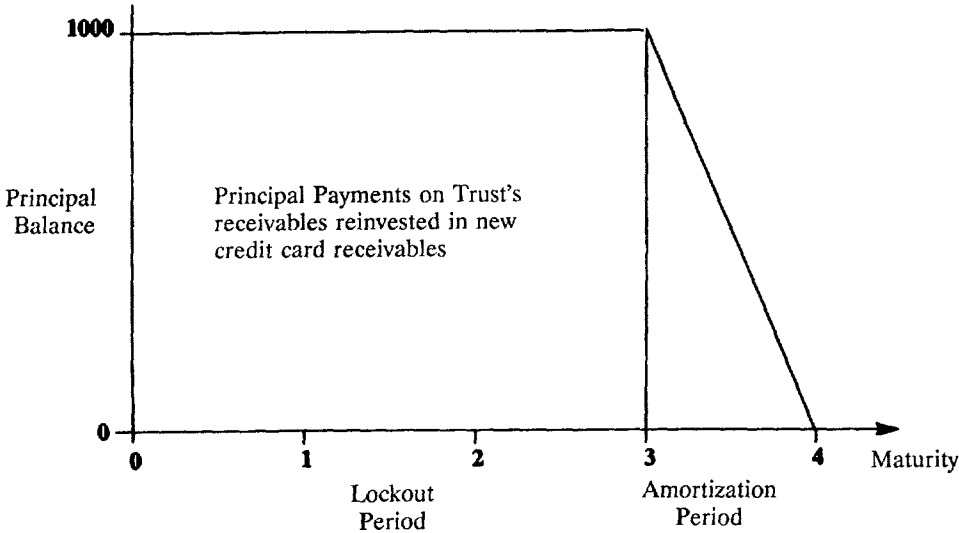
The second consideration, from the issuer's standpoint, is to try to reduce the issuer's debt/equity ratio. If it sells assets and removes them from its balance sheet, it will be reducing its debt/equity ratio. If, instead, the issuer finances its loans by issuing general debentures, it will be increasing its debt/equity ratio and risking trouble with the rating agencies. Finally, ABS issuance is attractive financing as a match against the asset. There is no better way to hedge to your asset portfolio than by selling a liability which is directly the cash flows coming from the assets. So, these are the reasons that asset-backed securities are attractive to the various issuers.

Next, I want to talk about structure. Let's begin with an auto loan ABS. Let's say that I take out an auto loan. If I had done it a couple of years ago, it probably would have been a three- or four-year auto loan, although today it might be a five-year auto loan. In the case of a five-year loan, I'll be making 60 equal monthly payments consisting of principal and interest, while amortizing the full loan balance down to zero over this period. Suppose now that my auto loan is pooled with others to collateralize an ABS. As I make my auto loan payments, they are flowing through directly to the auto loan ABS investor. So, whereas the security might have a five-year final maturity, it will generally have a two- to two-and-a-half-year average life. Now let's say a year passes, leaving four years remaining to the final maturity. The average life, however, has not rolled down a full year. Instead, it has only rolled down part of the year. In addition, some of the auto loans will be prepaid before final maturity. For example, if the borrower is in an accident, or trades the car in, or just decides to prepay, the result to the lender is a faster return of principal.

Now let's look at revolving charge asset-backed securities. Typically, a credit card balance will have an average life of about six months, meaning that if you take out a revolving charge, you're typically going to pay it off in six months. Well, that doesn't make for much of a security. So, a structure was created such that for a prespecified period of time, whenever any principal is repaid, these proceeds are used to buy more receivables from the issuer. So, when Citicorp issues a billion dollar credit card deal, in reality, every six months or so it's rolling over. As the principal is coming in, it is used to buy more receivables until the end of the revolving period. This is followed by an amortization period, when the principal is being applied to pay off the investor. So, you have a revolving period, then an amortization period (see Chart 3).

Let's compare the three types of principal paydowns (see Chart 4). When you buy a Treasury security or a noncallable corporate, typically the entire principal balance will remain outstanding until the maturity date when it is repaid in a single payment. This is often called a bullet. Credit cards actually look pretty much like that. They have a revolving charge period, during which no principal is returned, followed by a relatively quick amortization period. Auto loans look quite different, more like a mortgage security with monthly payments of both principal and interest. Therefore, the outstanding principal of the investment is continuously declining over time.

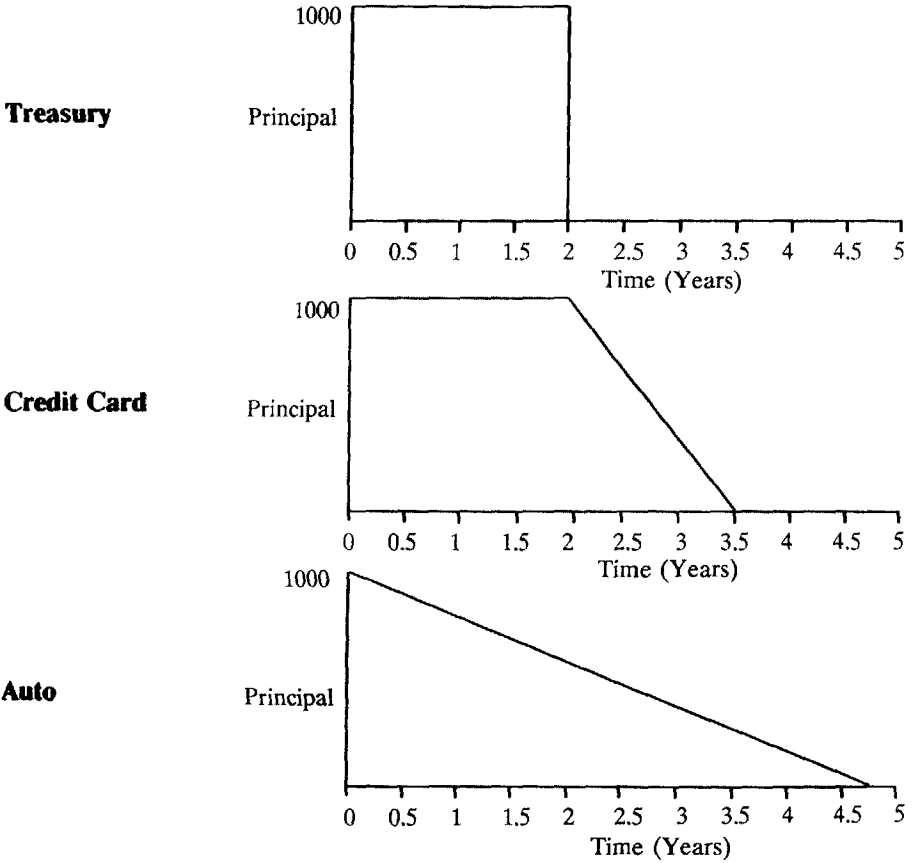
Credit Card Lockout Period



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CHART 4

Comparative Principal Paydown Schedules



ASSET-BACKED SECURITIES

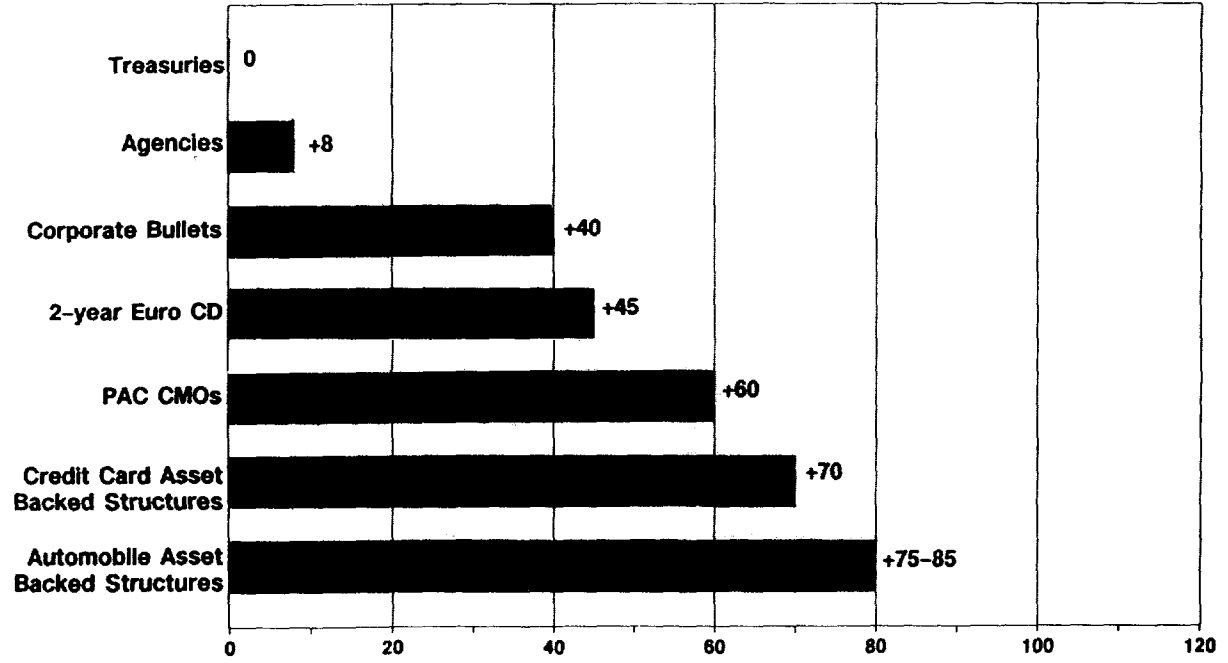
What are the ramifications to the investor? One is that, depending on what insurance liability you might be hedging or funding, it might be more appropriate to use one as opposed to the other. Another consideration is your yield curve viewpoint. You have to make a determination of whether or not you want a fast roll down the yield curve. With a Treasury or a credit card security, the maturity or average life will roll down the yield curve quite rapidly. A three-year average life security will become a two-year average life security after one year. With an auto loan ABS or with a typical mortgage security, you don't roll down the yield curve as fast. For example, consider a GNMA with about a 10-year average life and a 30-year final maturity. One year from now, the average life is not going to be one year less. Instead, it will probably be a third to a half year less. Similarly, an auto loan ABS starts out with a five-year final maturity and a two-year average life. One year from now, it will have rolled down only a fraction of a year.

Let's now consider yield spreads and give you an idea of why Dave was kind enough to form this panel and invite all of us. Why do investors care about asset-backed securities? We've said that they're very simple securities. Let's compare them to other high-quality alternatives (see Chart 5). As a baseline we could buy a three-year Treasury note. We could also buy agencies. They only yield about eight basis points more (than Treasuries) right now. We could buy AAA corporate bullets. They only yield 40 or 45 basis points more. We could buy Euro CDs for a little bit more. Shorter maturity planned amortization class (PAC) CMOs now yield only about 60 basis points over Treasuries. Credit card securities yield about 70 (basis points) over, and auto ABSs yield anywhere from 75-85 over. You can get more yield with more exotic collateral forms. For example, with recreational vehicle loans, we can get up to 100 over, still as a AAA-rated ABS. That's the reason why we're here, and that's the reason why there is so much investor interest. The yields of these securities really dominate other high-quality securities. There are credit features you have to take into account, but I will leave those for Bob to discuss. Dennis will give you an investor's view of how you go about comparing and contrasting whether it's worth the incremental yield spread to take on the additional liquidity or credit risk.

Historically, auto loan ABS spreads have been fairly stable over time, ranging from 70 to 110 basis points (see Chart 6) over comparable maturity Treasuries. The best time to have ever bought them was right after the stock market crash, when all corporate spreads widened. That's when they got up to about 110, or even briefly to 115 over, but typically they tend to be in the range of 70-85 basis points over Treasuries. Given how short they are, spread changes rarely dominate the income advantage, meaning that the income advantage over Treasuries is generally enough to offset whatever spread change might occur while owning the security. They are therefore a low risk bet, and very likely to outperform lower yielding, short duration alternatives.

Let's talk briefly about some of the longer credit card asset-backed securities. The long ABS sector can be divided into two categories. One group has substantial early redemption risk, and the other doesn't. Long ABSs have a problem with early redemption. I mentioned before that credit card securities have a long revolving period before the investor receives principal. The problem arises if defaults rise, or if the yield of the portfolio declines, causing a loss of the cushion which is there to protect the investor on a credit basis. Structured into all of these deals is a provision such that, if the cushion

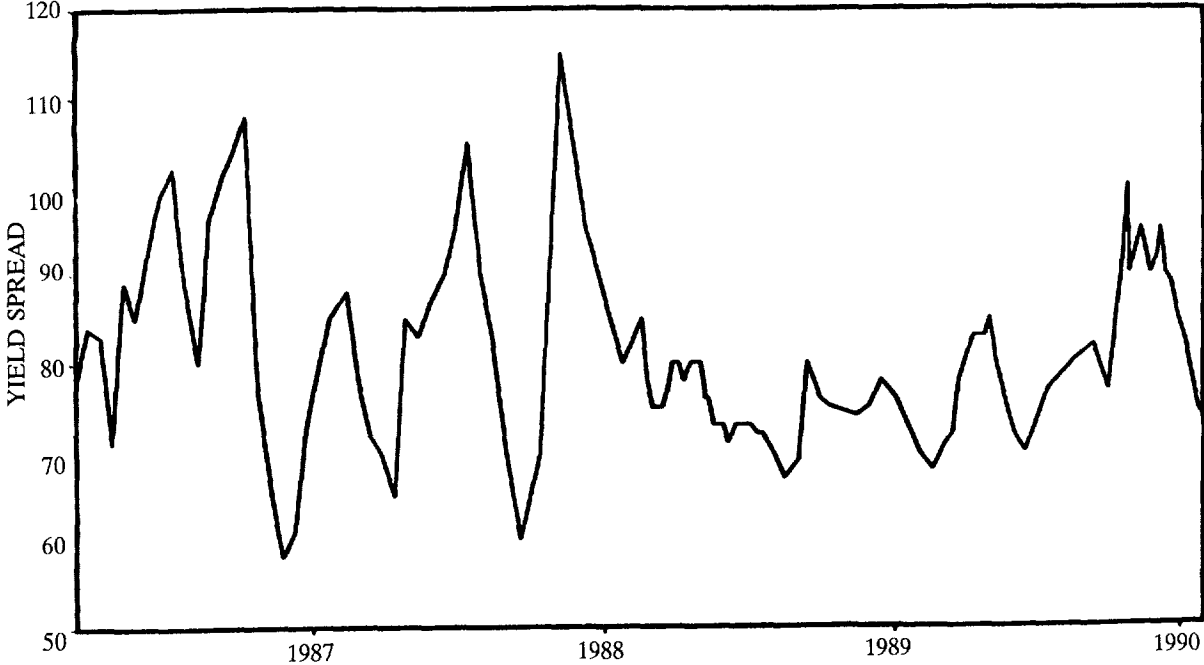
Spread Comparison Among Triple-A Rated Securities 3-Year Average Life/Maturity



982

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CHART 5

Historical Asset-Backed Spreads to Treasury 2-year Autos



983

ASSET-BACKED SECURITIES
CHART 6

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between the yield on the portfolio and the default rate gets narrow enough (or several other situations occur), then an early payout is triggered. If your principal is paid out early and you're funding a long liability such as a GIC, that can be deadly. This is why the longer average life asset-backed securities trade at wider spreads than do the shorter ones, and that is also why their spreads tighten if they drop below par.

One security which represents a new structure is the J.C. Penney Series C. This represents an alternative in the long average life ABS sector which doesn't have that type of early redemption risk. The reason it doesn't is that, if a payout event occurs, there is a conditional interest exchange agreement with a AAA-rated bank, whereby the bank guarantees that the investor will continue to earn the coupon rate initially promised. This security yields about 85 basis points over the 10-year Treasury. It is rated AAA by both Moody's and Standard & Poors. That yield compares favorably with other noncallable, 10-year alternatives, including such agencies or quasi-agencies like TVA and World Bank, or with some corporate names like Dupont, Nippon, or Anheuser Busch. I certainly like Budweiser, but you can get more spread by doing something like this. You have to go into names which are distressed either by a lot of supply, or by some other problem, in order to get more yield than you can get on a AAA-rated ABS whose letter of credit is from a AAA bank.

Quickly reviewing, the advantages of asset-backed securities are quality, cash-flow consistency, sensitivity of average life and duration, positive convexity, spread, and liquidity. There is really very little that we trade on our trading floor that's more liquid than asset-backed securities. They are very easy to model and understand. Good information is disseminated on them. We've had days when we've traded (on a secondary basis) several \$100 million. These are, I think, much more liquid than standard corporate bonds, where it's difficult to get bids for large blocks if the issuer becomes distressed. If you stick with the liquid ABS names and large deal sizes, you should find excellent liquidity.

So much for the happy talk. What are the risk factors? I think there are three major risk factors in asset-backed securities. One is increasing asset default rates. Bob can address whether that is a risk for actual default of the security or for early redemption. I think that the second real risk is early payouts. I mentioned those as being a big risk in a bull market if you're funding a fixed rate liability. The third is spread widening. Obviously, if you get massive spread widening while you hold the securities, you're going to underperform other alternatives.

The intent of Table 1 is to show how severe the risk is if you have early redemptions of long asset-backed securities. Let's go to the column that says "7% reinvestment rate." I think it's very plausible that at some point we could have reinvestment rates as low as 7%. If you bought a 10-year ABS with a 9.5% coupon and yield, your compound realized return, assuming no early payout, would be 134.3%. Let's say you get a payout after five years, and you have to reinvest the money in a 7% environment. In that case you would only have a 119.7% compound realized return, or about 15 percentage points behind what you would have realized with a security with no early payout risk. That illustrates why you have to be sensitive to early redemption potential in the ABS market.

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TABLE 1

Impact of Early Payout:
Realized 10-Year Returns on 9.5% 10-Year Bond

Early Redemption Assumption	Reinvestment Rate		
	5%	7%	9%
No Early Payout	121.3%	134.3%	149.0%
Payout after 3 years	84.2	112.2	144.3
Payout after 5 years	96.1	119.7	145.9
Payout after 7 years	107.0	126.1	147.3

One issue that some people have been concerned about in the past (but shouldn't be) is the risk of prepayment rates changing on auto loans. We did a study of all of GMAC's loan originations. In fact, we have more data on auto loan prepayments than we've ever had on home mortgage prepayments. The message here is that prepayments are very consistent among different interest rate environments and among different coupons of auto loans. Notice (in Table 2) that we studied the same season of the year, March through May, for 1982, 1983 and 1984. We chose those periods because they represented environments where interest rates were very high in 1982, much lower in 1983, and moderate relative to those two in 1984. We looked at auto loans with coupons below 12%, within the range 12-14%, and greater than 14%. The point is that the percent ABS, or the percent of the original principal balance prepaid every month, is very consistent among all these boxes.

TABLE 2

Cash-Flow Consistency
GMAC 1985-A Grantor Trust
48-Month Contracts Prepayment Analysis

Auto Loan Coupon	Interest Rate Environment		
	High 3/82 - 5/82	Low 3/83 - 5/83	Moderator 3/84 - 5/84
Less than 12%	1.50%	1.38%	1.20%
12% to 14%	1.37	1.35	1.34
Greater than 14%	1.37	1.50	1.55
Weighted Average*	1.38	1.43	1.47

* Weighted by \$ amount of loan falling in each coupon category.

Why are all the prepayment rates so consistent? The major reasons that people prepay auto loans are that they're in an accident, their car is stolen, they're trading in, they default, etcetera. None of these events are related to interest rates. I wonder if anybody has ever tried to refinance an auto loan because interest rates went down. It's next to

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impossible. As soon as you drive out of the showroom, you have a used car. Loan rates just went up several hundred basis points. Moreover, most auto loan contracts use the "rule of 78" accounting, which means that the amortization for purposes of paying off the balance is much slower than you would calculate using a scientific amortization. It's much more onerous to refinance an auto loan than it is to refinance a home mortgage, and as you can see by the numbers, it doesn't frequently happen. People with greater than 14% coupon auto loans had only a trivially different propensity to prepay, even in the low interest rate scenario, 1.5% per month versus 1.38% for people with auto loan coupons below 12%.

Furthermore, the effect of different prepayment rates on an auto loan ABS is trivial compared to what it does to a typical nonPAC CMO. In Table 3 we show the FHLMC 70-1 targeted amortization class (TAC) CMO compared to a 48-month auto loan. If we use a base case of 1.2% or 1.3% ABS, we get a 1.8-year average life. This doesn't vary much even when you significantly vary prepayment assumptions. Now look at the TAC CMO that has an initial average life of three years at 155% PSA (Public Securities Association prepayment model). The average life can extend 19.5 years on this security. This is an extreme case, but I think it highlights that there is very little risk of average life variability in an auto loan ABS relative to a CMO, and often they trade at fairly similar spreads over Treasuries.

The final thing I want to quantify is that if you buy an ABS at various spreads to Treasuries, and you hold it for six months or a year, what can the spread widen to before you lose versus Treasuries? I think this really highlights why asset-backed are such winners. Let's say you buy a two-year credit card ABS at 63 basis points over Treasuries. This is the second row on Table 4. That spread can widen (by 27) to 90 basis points in six months, or to 145 basis points in one year. That's fairly dramatic. As you go up to the longer average life items, you can't withstand as much spread widening as you can in the shorter ones. So, short average life asset-backed securities are very likely to outperform Treasuries even over short holding periods. As you go out to longer average life items, you're taking more risk over a short holding period, but still over longer time periods ABSs are very likely to outperform.

In summary, for short autos and short credit cards, I think credit risk is minor. Early redemption risk? In short autos, you have none; for short credit cards, it's minor. For longer securities, you have to distinguish between issues that have a lot of early redemption risk and ones that don't. There is currently only a very small yield difference between them. The ones that don't have early redemption risk are a much better deal.

MR. HALL: Our second speaker is Bob Grossman. Bob is the senior Vice President in Fitch's Structured Finance group which is responsible for rating asset-backed, mortgage-backed and letter-of-credit-backed securities. Prior to joining Fitch, Bob was senior Vice President at Standard & Poor's where he managed nine analysts in the asset-backed securities group. During his five-year tenure at Standard & Poor's his responsibilities included developing criteria for securities backed by commercial and industrial loans and corporate bonds. Before that, Bob has also been responsible for analyzing money center and regional banks. Bob earned both BA and MBA degrees from New York University where he was also elected to Phi Beta Kappa.

Sensitivity of Average Life to Prepayment Rates

<u>ABS</u>	<u>0.00%</u>	<u>0.40%</u>	<u>0.80%</u>	<u>1.20%</u>	<u>1.30%</u>	<u>1.60%</u>	<u>2.00%</u>	<u>2.40%</u>
48-Month Auto Loan								
Average Life (Years)	2.26	2.11	1.97	1.82	1.79	1.68	1.53	1.39
<u>PSA (%)</u>	<u>0</u>	<u>75</u>	<u>110</u>	<u>155</u>	<u>160</u>	<u>200</u>	<u>250</u>	<u>300</u>
FHR70-1 (TAC CMO)								
9s due 9/15/20								
Average Life (Years)	19.5	9.5	6.0	3.0	2.8	1.9	1.8	1.8

TABLE 3

The Total Return Perspective:

Breakeven Spread Widening to Similar Average Life Treasuries

	Approximate New Issue Spread	Holding Period	
		6-Month	1-Year
1.5 Year Auto ABS	80 bp	37 bp	95 bp
2.0 Year Credit Card	63	27	82
3.0 Year Credit Card	70	17	42
4.0 Year Credit Card	70	12	29
5.0 Year Credit Card	80	12	26
7.0 Year Credit Card	90	10	21

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TABLE 4

Levels as of March 3, 1990

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I also want to give you a little capsule summary of Fitch. Fitch Investor Services, Inc. was founded in 1913 when John K. Fitch published the Fitch Bond Book, which was the first complete listing of bonds available to investors. In 1922, Fitch saw a need for differentiating the quality of available bonds and introduced the now familiar AAA through D rating symbols. Fitch was acquired in April 1989 by an investor group led by H. Russell Fraser, previously chairman of AMBAC Indemnity, and Robert Van Kampen, founder of Van Kampen Merritt. Since that time Fitch has grown from a staff of 45 to 130. A significant portion of the growth has occurred in the structured finance area which is headed up by Neil Baron. Prior to joining Fitch, Neil was senior partner of Booth & Baron. In that capacity he advised Standard & Poor's, commercial and investment banks, the White House, the Federal Home Loan Bank Board, as well as others. Fitch has established investors as its priority in this new effort, as it is this constituency that rating agencies ultimately serve. Over the past year Fitch has met with many institutional investors throughout the United States to explain its rating methodology and to gain an understanding of what information Fitch could provide that would be useful to the investment community. Fitch feels that by complementing its ratings with timely written explanations and research it will add significant value to investors.

MR. ROBERT J. GROSSMAN: Let's turn the clock back 20 years and imagine yourselves in the early 1970s and a bond salesman from the 1990s comes to visit with two securities that he'd like to sell, the two hot items of the day. You can either buy a senior/subordinated credit card trust with a hard bullet or an auto-loan-backed pay-through bond. He tells you that both instruments are rated AAA. Well, I'm sure the only thing that would have made sense to you at the time is the AAA rating, and it's sort of interesting that the financial market has changed rather rapidly over the past 20 years, but the meaning of a AAA rating has remained unusually constant. While I think there's always room to provide investors with more information, the AAA rating, AA rating and the ratings process remains a very important part of the origination and sales of asset-backed securities. I'll briefly review the meaning of the ratings themselves, as well as give you a little bit of a flavor of what the rating process entails, and then I'll go over our framework for analyzing asset-backed securities, some of the key points that we look at when rating these transactions, and, finally, apply those analytical focal points to a couple of specific transactions.

What are ratings? Well, ratings are simply an opinion of relative credit quality; that is to say, what is an issuer's ability to repay debt or preferred stock? In Table 5, the highest ratings are AAA, and those ratings are typically large, industrial companies. General Electric, IBM, many sovereigns, and many structured financings, including some asset-backed and mortgaged-backed securities, are in the AA area. Single A is a middle investment grade rating. You'll see many insurance companies buying securities in the A category. BBB is the lowest investment grade rating. That's significant because many buyers are precluded by regulation or charter from buying anything rated below BBB.

The next lower rating categories range from BB to C. Although these used to be known as high-yield securities, over the last few months "junk" is probably the name you have seen more frequently. The D Category indicates a default or an imminent default on a security. Finally, commercial paper, because of its shorter maturity, typically up to 270 days, has a more abbreviated rating scale. In fact, most commercial paper is rated F1+

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or F1. If rated F2, it starts to lose liquidity. However, securities don't always trade based on their rating. I think Greg's talk highlighted that quite nicely. There are other factors, such as supply and demand, covenants, sinking funds, or other features. So although a rating is a good indicator of how a security will trade, it is clearly not the only one.

TABLE 5
Ability to Make Ultimate and Timely Debt
And Preferred Stock Payments

	Bonds and Preferred Stocks	Commercial Paper
<i>Investment Grade</i>	AAA	F - 1+
	AA	F - 1
	A	F - 2
	BBB	F - 3
<i>Junk</i>	BB	F - 4
	B	
	CCC	
<i>Imminent Default</i>	CC	F - 4
	C	
<i>Default</i>	DDD	D
	DD	
	D	

The rating process will typically start with a rating request from an issuer. On a new transaction from a bank that's never issued an ABS before, the process takes anywhere from three to four months. There are many different constituencies that need to get involved in an asset-backed securitization at a commercial bank. Typically, we'll visit the seller, which is usually the servicer, to understand its underwriting procedures. How good is management? What is the depth of management? What kind of human and hardware resources are committed to the business? There may be some new research required. Maybe the collateral is a new type of asset that hasn't been rated before, such as RV loans, or home equity loans. There is a legal structure analysis. We also need to analyze the credit enhancement provider, often a foreign bank, such as Credit Suisse or DKB, which provides a letter of credit for these transactions. The rating is issued.

The important thing to understand is that rating structured finance is an interactive process. If we're rating a bank, for example, and the rating comes back A or A+, there's very little that management can do short of selling out the company to a much stronger

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decision, and the issuer has the right to appeal. Unlike a baseball umpire, we do sometimes change our mind.

An ABS is different from any other corporate obligation in that the source of repayment is not from an operating company. It's from a pool of assets. This pool of assets has been separated from another entity, usually the seller, and it is "credit enhanced." That means that there is some extra level of protection, such as a letter of credit or overcollateralization. Let me give you a simple example. Let's take a Chrysler auto loan transaction. Now, Chrysler, itself, is rated BBB, an investment grade rating, but a low investment grade rating. In our example, it wishes to issue a AAA-rated auto loan transaction. First of all, what would you rate any individual auto loan? Well, it would obviously get a junk bond rating. Most auto loans have 100% loan-to-value ratios. They are loans on a depreciating asset. So, it would be very hard to assign a high rating on any individual auto loan. However, over a period of time, you can get quite comfortable with predicting losses for a well-diversified pool of auto loans. So that's the first type of credit analysis we do. How many losses can we expect under different economic scenarios? The second issue is that Chrysler is rated BBB. It would like a AAA rating for this deal. Therefore, we need to analyze what happens if Chrysler becomes insolvent. Will it interrupt the flow of funds from the auto receivables to the ultimate investor? If that would happen, it couldn't be rated AAA. So, the legal analysis is the second leg of our analysis. Finally, as we all know, consumers sometimes make their payments late. Suppose that all of the auto loans are due on the 15th of the month. We couldn't really expect the payments to be made to the investors on the 16th, if 10% or 20% or even 30% of the people are paying late. So, we also have to analyze the cash flow of the assets relative to the instrument that we're rating.

In the asset analysis, our objective is to develop loss expectations for assets under various economic conditions. The earliest form of this type of analysis was a study done on mortgages during the Depression (in the 1920s and 1930s), to find out how many mortgages defaulted. That proportion was approximately 10%. Consequently, it was felt that any security that met certain geographic distribution factors and other underwriting parameters would be AAA if it had 10% credit enhancement, because it would have survived what we would call the worst-case scenario, in this case the Depression. That may be okay with mortgages because we have a pretty good track record of mortgages and their performance. It's a lot tougher when you're trying to analyze a pool of home equity loans or RV loans, things that just didn't exist not only 60 years ago, but also in fact not even 15 years ago. So, we must perform not only a quantitative analysis, looking at delinquencies and losses, but also a qualitative one as well. What are the underwriting standards of the selling institution? How do those standards compare to the competitors? Also, many institutions will have very tough underwriting standards, but do they adhere to them? We'll check for how many exceptions are made to the normal policy. That's quite important. Just to find out whether an institution adheres to its criteria is important. For example, on a home equity loan transaction many lenders will verify employment. They'll verify that the person applying for the loan is employed and that the income the person earns is the same as what he or she put on the application. Other lenders use what's known as the "fog-the-mirror test," and the performance of those loans is tougher to predict.

PANEL DISCUSSION

Management depth is very important. For some of these sellers that we've mentioned, such as GMAC or Chrysler, the servicing of the loans and the underwriting of the loans are a very important part of their business, and usually you'll find that their greater attention to detail is very helpful in terms of the quality of the loans. One of the risks with smaller servicers is that, as a sideline business, they really don't keep their eye on the ball. So, that's an important part of the qualitative assessment. The quantitative analysis starts, at least, with losses and delinquencies. What are those numbers compared to the industry norms, and compared to regional competitors, and how do they compare with what you've understood from the qualitative side? For instance, if a seller has very conservative underwriting standards, why are losses and delinquencies more than its competitors'? We hope the numbers and the qualitative assessments correlate. Geographic diversity is also important. For most asset-backed securities, one of the benefits is that they include a large number of loans, perhaps as many as 30,000, which are diversified throughout the United States, thereby limiting geographic concentration problems. For example, if there's a regional downturn in Texas, the Northwest, or any other region, the diversification really adds to the strength of these securities. Furthermore, we can't simply rely on what loan losses have been in the past. Suppose that for a given issuer, we know that losses have been around 40-45 basis points. However, we also know that in the past they were making four-year loans, and the trend now is to make five- and six-year loans. The reason why the loans have been stretched out is to make the payments smaller to qualify more borrowers. We couldn't reasonably expect losses in the future to be the same as the ones in the past. So, when we're deciding on how much credit enhancement is necessary to get a AAA rating, although the past is very helpful, obviously we have to make projections. Typically what you'll see for a AAA rating is loss coverage of from four to ten times historical losses, depending on what the absolute level of the losses is and what we expect in the future. A security where you could expect 1.5% losses might have an 8-9% credit enhancement.

Cash-flow analysis is very important. If people are making the payments on their loans several days late, you can't reasonably expect money to go to the investors on the day after the loans are due. This leads to another important factor in an auto loan transaction. Typically, the servicer will be making advances on delinquent loans. Well, if Chrysler is rated BBB, we can't really rely on Chrysler to make those advances because while there may be no immediate concern of its insolvency, Chrysler is still not rated AAA. Consequently, you'll typically see a letter of credit that covers Chrysler's obligation to make these advances on the delinquent loans.

Once we're comfortable with the credit enhancement and the cash-flow characteristics, we need to look at the legal structure. We need to make sure that the insolvency of the seller will not interrupt the flow of funds from the assets to the ultimate investors. This is pretty easy to do for commercial banks and savings and loans, as their primary regulators have told us what is necessary in order to avoid an interruption of the flow of funds. We have letters from the FDIC and the Federal Home Loan Bank Board as to what procedures are necessary so that flows of funds would not be interrupted in the event of a bank's insolvency. There have been many test cases of banks, particularly thrifts, becoming insolvent, and in all cases these securities have not been affected. For example, First Republic and M Bank issued ABS transactions, and the insolvency of those institutions did not disturb the investor's security. It's more difficult for companies

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subject to the bankruptcy code, that is, industrial companies. The bankruptcy code allows for what's known as an "automatic stay." Once there's a Chapter 11 filing, the debtor has possession of the assets and any cash flow arising out of these assets. For example, if Chrysler were to go bankrupt, debtors would own Chrysler's auto loans as well as the cash flow coming in from these assets. You need to make sure that in a bankruptcy the securitized loans are not perceived to be part of the bankrupt estate.

There are three key areas of legal analysis that we look at. The first one is the "true sale," the acquisition of the receivables by the trust. Many times these receivables are deposited into a trust to make sure that in a bankruptcy of the seller, the loans would be perceived to be a sale to the trust, and not that the seller had merely pledged the receivables against the loan. If a bankruptcy judge could say that you didn't really sell those loans to the trust, but that you merely pledged them in order to induce investors to make you a loan, then instead of owning the receivables and the cash flow from these receivables, you might really be a secured creditor. While ultimately you may be protected because you have collateral, from a timeliness perspective you'd be very upset because the automatic stay would apply and you wouldn't receive coupon interest for quite some time. Now, there are many different legal factors that are used when viewing whether a transaction qualifies as a true sale or not. Many of them revolve around the retention of risk. That is to say, if I sell \$100 of loans and guarantee \$10 of loans, and we know that historically we expect only 1% losses on those loans, haven't I really guaranteed all the risk of loss on those loans? If a bankruptcy judge says you really didn't sell those loans, that you just pledged them for a loan, this has very serious consequences. So, that's one of the most important legal elements when viewing an ABS transaction, the transfer of the receivables from the seller to the trust.

The second issue is nonconsolidation. Many times you'll see securities issued out of subsidiaries of industrial companies. As we know from history, many times insolvent companies have pulled healthy subsidiaries into bankruptcy. If that was the case with an ABS, you'd have the same problem as with the true sale problem. There's a well-developed legal history of what qualifies as a separate subsidiary. What you want to do is set up a subsidiary that's legally separate, with no legal hook for the parent company to claim ownership of the collateral. Usually that requires having separate directors, separate bank accounts, and effectively announcing to the world that you're setting up a subsidiary solely for the purpose of the financing.

The third issue is comingling. Because of the complexities with the servicing arrangement, what happens if the servicing company goes bankrupt while it's holding, say, a week's worth of payments which are to be transferred to the trust? Well, those payments could be lost. It's very difficult to identify where those specific funds are. Therefore, it would be possible for a week's worth of collections to be tied up in the servicer's bankruptcy. Typically there are two ways to cover this risk. One is to have a rating trigger, so that a Chrysler can use the funds for 48 days until its rating has dropped below a predetermined level unless, as I mentioned before, it gets a letter of credit to cover that risk. Typically what you find is that sellers want to use the float on that money for a month or two (or how ever long they have it). However, it is very complicated, with all the hundreds of thousands of loans a company services, to isolate the cash flow from these particular loans.

PANEL DISCUSSION

With that in mind, let's consider a specific Chrysler auto transaction, CFC-8, which was issued about a month ago, and which Fitch rated AAA (see Chart 7). In this transaction you can see that auto loans were sold into a trust. There was a 9% letter of credit from Credit Suisse to cover losses. Credit Suisse was getting paid from a 2.5% spread account. A spread account results from the fact that auto loans yield more than the certificates that they support, creating an excess spread every month. There was an initial deposit to this account, and then if there are any draws on the letter of credit, the letter of credit bank looks to this account to repay itself. So, it's not really reimbursement from Chrysler itself. From a legal perspective, the true sale was easy to get in this case in that there was no legal recourse back to Chrysler. It sold the receivables. If there were losses, the losses would be covered from the letter of credit. If you think about it from Chrysler's perspective, why would it do this transaction? What it's looking at is the 2.5% spread account. Two-and-a-half percent is 40 times leverage, because it's looking at it as 2.5% equity, whereas if it kept the loan on its balance sheet, it would be required to keep, say, 10%. From Chrysler's perspective the capital savings, as Greg mentioned before, are really significant. There's also a servicer letter of credit for 5% which covers the advances that Chrysler needs to make on the loans as well as any comingling of funds. From a legal perspective we're very comfortable that, in the unlikely event of Chrysler's insolvency, there would not be an interruption of funds from the asset pool to the ultimate investors.

What are the credit characteristics of this pool? Seventy-two percent of the loans were for new vehicles (see Table 6).

TABLE 6

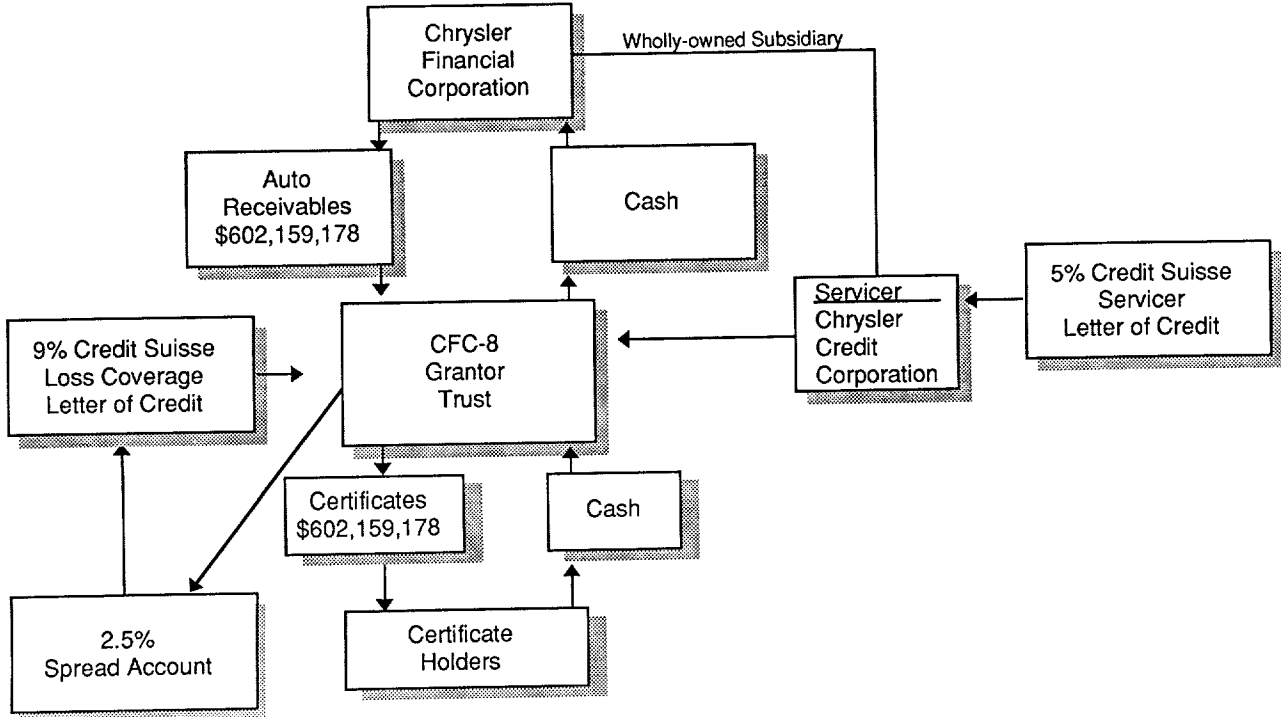
CFC-8 Grantor Trust

- o Pool Statistics (Automobiles, Minivans & Light Trucks)
 - New Vehicles 72%
 - Average Seasoning 13 Months
 - Dealer Recourse 28%
 - Texas Concentration 9%
- o Loss Coverage
 - $\frac{9\% \text{ Letter of Credit}}{1.5\% \text{ Expected Losses}} = 6 \text{ X Coverage}$

We find that losses on new vehicles are much less than on used vehicles. So, that was a positive. The strongest positive was that these loans were 13-months seasoned. Typically, with consumer assets you'll see losses occur during the first six to twelve months. There may be losses after that, but usually people who aren't going to make their payments don't make them in the first year or so. So, a 13-month seasoned pool is really very strong. The Texas concentration was only 9%. It was a pretty well-diversified portfolio from a geographic perspective. Finally, Chrysler has the best underwriting quality and servicing of the Big Three automakers. Its losses on auto loans are much

CFC-8 GRANTOR TRUST
 \$602.2 Million Asset-Backed Certificates "AAA"

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ASSET-BACKED SECURITIES
 CHART 7

PANEL DISCUSSION

lower. It is really the strongest in terms of loan quality. Historically, I think losses would have been about 1% over this period of time, but, as I mentioned before, the newer loan terms have been stretched out a little, and we expect that just because of the economy, you could expect maybe 1.5% to be a more reasonable number. So, the 9% letter of credit really covered six times what we expected the loss experience to be. Again, very significant credit protection.

Let's move over to a credit card transaction. In credit card transactions, there are usually two types of certificates: one that's sold to the public, known as an investor piece, and another retained by the seller called the seller piece. The reason for this is that credit card receivables are cyclical. During the holidays people draw down their credit cards. The balances go up, but they also come down very rapidly in January and February. If you sold \$100 million of receivables, you wouldn't want to be prepaid three months into the transaction. To avoid this, a revolving period is established where, as long as certain performance measures are met, the seller sells more receivables to the trust. The investor piece stays constant. Toward the end of the revolving period, say 48 months, money is deposited into a bank account, so that at the end of 60 months, there will be enough in that account to pay off the investor in a bullet. What investors didn't like about the early credit card transactions was that when they wound down, they got a little bit of principal and interest every month. So, now there's been a fair amount of modeling and structuring of the transactions to enable all of the principal payments to be returned at once. In some transactions there will be no guarantee that you'll get everything in that last month. It could be that payments spill over for a month or two. Maybe you get \$90 million one month and then \$5 million in each of the next two months. That is known as a soft bullet, although even in a soft bullet the odds of getting all of your principal back by maturity are very high. For some investors who really need more certainty of the final maturity, there is the hard bullet, where a certain percentage is guaranteed by a highly-rated bank so that if \$5 million or \$10 million of principal hasn't been paid by the last date, the bank advances those payments. Finally, if the quality of the portfolio does deteriorate, payments must be made to investors earlier. That's an important trigger in that it limits credit exposure to a deteriorating pool. On the one hand, you do lose call protection in many of these securities. On the other hand, you also lose your exposure to a deteriorating pool, and I think that while neither choice is pleasant, most investors would rather limit the possibility of principal loss.

One of the key credit terms that is important is the annual percentage rate. This is the yield on the underlying portfolio. Many credit cards will yield anywhere from 17-22%, and that's important because this excess yield is the first source of credit enhancement. That is to say, losses come out of the spread first. In an average transaction, let's say that the receivables yield 20%. The investor certificates that we're rating pay 10%. They have 4% losses annually, and cost 2% for servicing. That leaves an excess 4% spread. You could have 4% additional losses, or an 8% annual default rate, without requiring any other form of credit enhancement. So, the yield is a very important part of the credit enhancement on a credit card structure. The monthly payment rate (MPR) is also very important. That's the ratio of cash payments to the outstanding balances on the cards. It is important because in one of these amortization events where you start paying down investments rapidly, a high MPR will result in you being out of the pool much quicker than a slow MPR. An amortization event, again, occurs when a certain

ASSET-BACKED SECURITIES

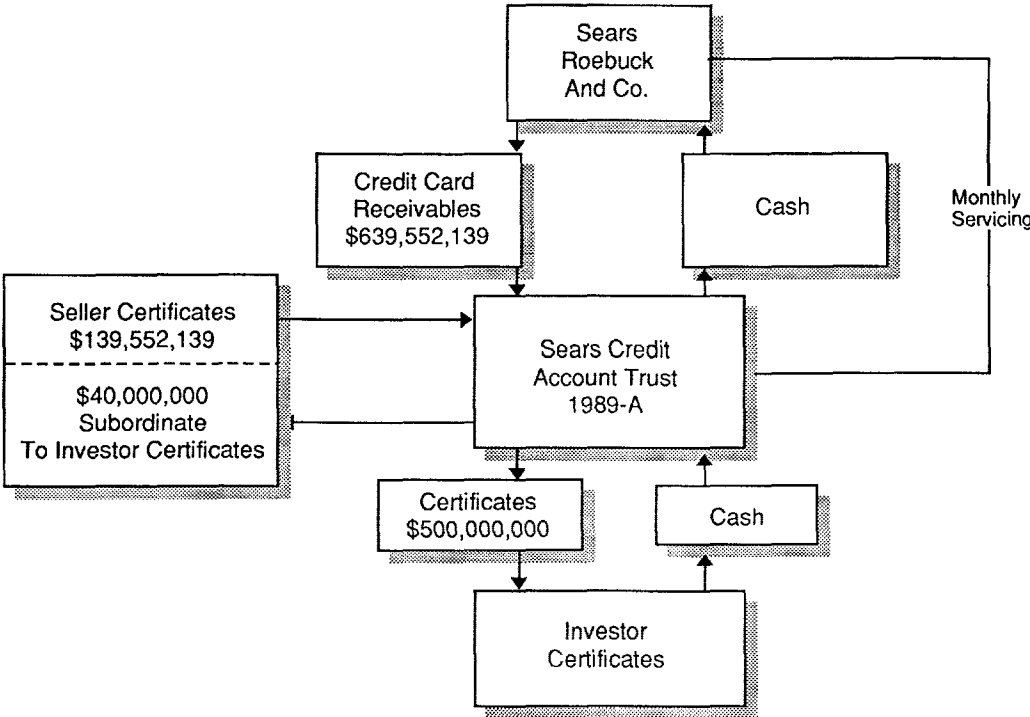
level of losses or a certain level of yield on a portfolio is breached, after which all the cash flow or a percentage of the cash flow is dedicated to the investor and results in the investor being paid out early.

In the Sears Credit Account Trust 1989A transaction (see Chart 8), \$640 million of cards were put in a subsidiary. Some \$500 million of investor certificates were sold to the public. Of the investor piece of \$139 million, \$40 million was subordinate, and that was the form of credit enhancement. All the losses would first come from the subordinate piece. The one thing that was unusual in this transaction compared to virtually any other credit card transaction is that Sears held the subordinate piece in a subsidiary. That was one of the reasons why we downgraded this issue recently from AAA to AA. In the unlikely event of a Sears bankruptcy, there is a modest risk that a bankruptcy judge would say this really wasn't a full sale, that it was really a pledge, and that the subsidiary was established solely for credit enhancement. The opinions that were provided were very strong. Furthermore, we don't expect Sears to become insolvent. Nonetheless, we felt it was important to distinguish that there was a bit of a difference in this legal structure relative to, say, a Citicorp credit card transaction. So, there is very modest risk, although AA is still a very strong rating.

From the credit side, Sears has very good underwriting standards. It has a very diversified customer base, and its CFO always likes to say, in describing why his card is better than a bank card, that at Sears you use the card just to pay for merchandise, and very few people buy a refrigerator and then run off to Argentina. Sears has been in the business for a long time, and it does have very low losses. From a credit perspective the pool yields 17.59% (see Table 7). That's not as high as the bank cards. So, there's less excess spread in most Sears deals than in some of the bank deals. However, the seasoning (that is to say, how long these accounts have been with Sears) of 66 months is very strong. The MPR of 8% is low, as MPRs usually range from 5-20%. So, the 8% MPR is a bit slow, and if there was an amortization event, you'd be out of Sears over a slower time period, therefore exposing you to more losses than, say, a Citicorp deal. Defaults, on the other hand, are pretty low. Two and nine-tenths percent is low, relative to the universe of credit card transactions. But what I would like to do is illustrate the differences in how yield and MPR affect your ability to absorb losses. The Sears deal I mentioned before has a 17.59% yield on the receivables, an 8% MPR, which is a little low, but defaults of 2.9%. NCCT-89-5, a recent Citibank deal (see Table 8), had a 20.7% yield on the receivables, an MPR of about 14% (so people were paying the cards down more rapidly), and defaults of 4.5%. Just to illustrate a point, without changing any other variables (which probably isn't the perfect way to do this), we moved both deals up to the maximum default level that they could withstand on an annualized basis. We found that the Sears deal could withstand 17.3% annual losses, and investors would still get fully paid, but the Citicorp transaction permitted up to 29.9%. So, the excess spread, combined with a faster MPR, really strengthened the transaction. On an auto loan transaction we might just focus on losses. It's really more of a one-dimensional analysis. In a credit card transaction, the payment structure and payment rates are both very important in terms of determining credit quality.

SEARS CREDIT ACCOUNT TRUST 1989 A
\$500 Million Asset-Backed Certificates "AA"

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PANEL DISCUSSION
 CHART 8

ASSET-BACKED SECURITIES

TABLE 7

Sears Credit Account Trust 1989 A

Pool Yield	17.59%
Seasoning (Over 5 Years Old)	66.50
Monthly Payment Rate	8.00
Defaults	2.94
Loss Coverage From Subordination	8.00
Pool Concentrations:	
Texas	8.68
California	8.46
Florida	6.96
New York	5.76
Pennsylvania	5.67

TABLE 8

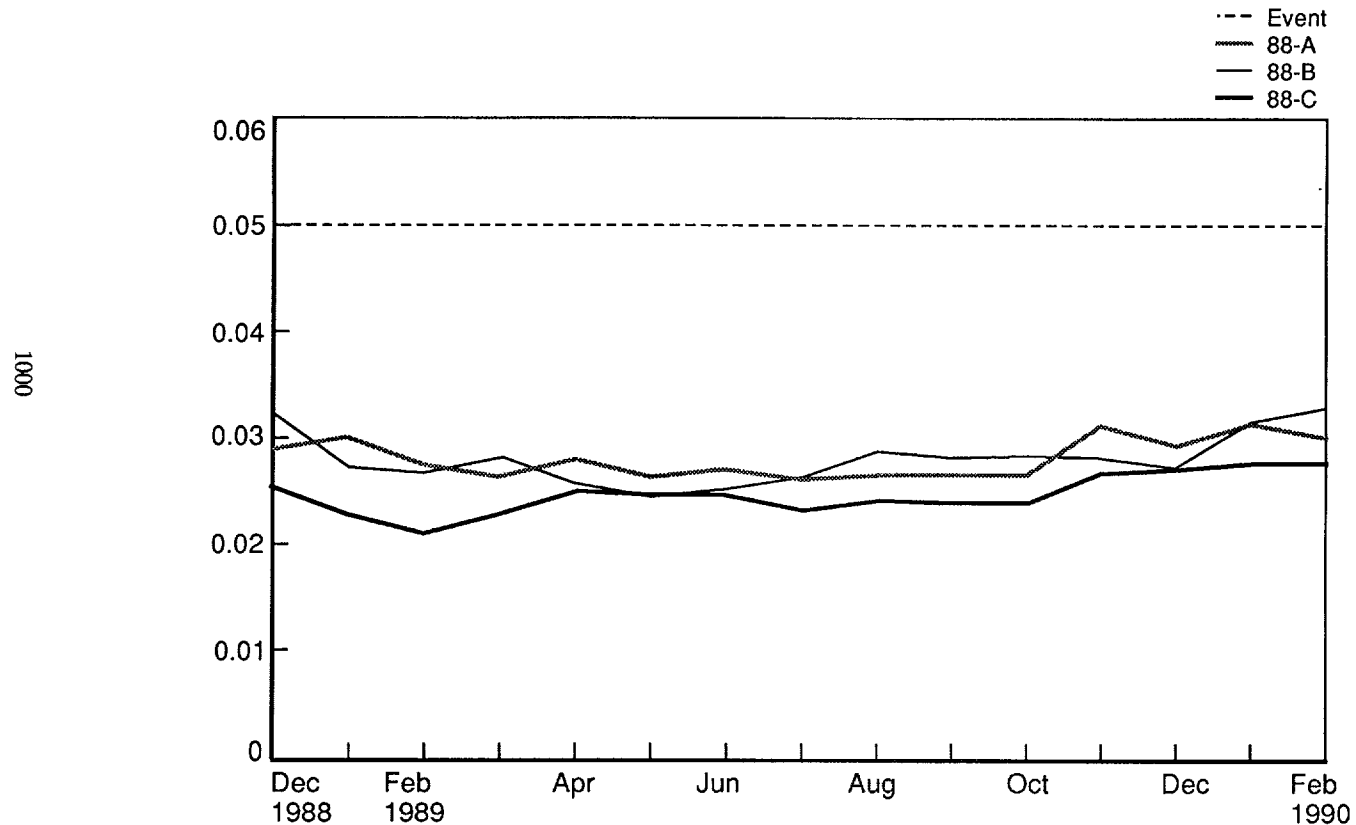
Sears Vs. Citicorp

	<u>Sears</u> <u>89-A</u>	<u>Citibank</u> <u>NCCT - 89-5</u>
ARP	17.59%	20.72%
MPR	8.00	14.16
Defaults	2.94	4.65
Subordination (%)		
Maximum Defaults (%)		
Able to Withstand	17.30	29.90
Increase Over		
Current Default Role:	15.20	25.20

Finally, the other risk that Greg talked about was early payment. One of the amortization events in the Sears deal is a 5% annual loss rate. You can see from Chart 9 that, relative to where the loss rates are now hovering, there's only a very modest risk of being taken out early. That's one of the benefits of having a card with good credit performance. Not all deals are equally strong. Generally, they're all very high quality securities, and we would expect very few problems with them, but nonetheless, there are differences, and I think it's important for investors to be familiar with some of these nuances from one security to another.

MR. HALL: Speaking third, representing the investor, is Dennis Richey. Dennis is with New England Asset Management, Inc., an investment advisor whose primary focus is the management of insurance company assets. His company currently has approximately \$3 billion under management. Prior to joining New England in 1988, Dennis was Vice President with Salomon Brothers from 1982, where he headed the insurance company services unit. Previously, he was a tax manager at Peat, Marwick, Main & Company.

**DEFAULTS VS. AMORTIZATION EVENT
SEARS CREDIT ACCOUNT TRUST**



PANEL DISCUSSION
CHART 9

ASSET-BACKED SECURITIES

Dennis is a graduate of St. Lawrence University and has an M.S. in accounting from New York University. He is a certified public accountant.

MR. DENNIS R. RICHEY: Bob and Greg addressed the credit and structural aspects of asset-backed securities. I hope to address why we as money managers buy these for some of our insurance clients, and where these fit in the whole scheme of funding insurance liabilities. Looking back a few months ago when Dave requested that I be on this panel, I thought that the interest in asset-backed securities would be somewhat limited because you're talking about an asset class which is AAA rated and very liquid, compared to the exotic securities which life insurance companies have been buying over the last five to seven years in the high yield and mortgage arenas. However, as we enter the 1990s and many insurance companies' names are in the front of *The Wall Street Journal* related to the quality of their portfolios, I think asset-backed securities will play a greater role.

There's a story that I heard a few years ago that is a bit entertaining, but also relevant. There were two men who decided to go camping for a weekend, and at about three in the morning they started hearing rumblings outside their tent. All of the sudden they were aware that there was a bear outside, and both of them became pretty nervous. One guy said, "Let's be quiet. Maybe the bear won't notice that we're here." But the other guy started putting on his clothes. The first guy said, "Why are you doing that? Y'know, you can't outrun the bear." The other replied, "No, I can't outrun the bear, but I can outrun you." That reminds me of the insurance industry because on the investment side it's very much a comparison with what your peers are doing. If I look back on my days at Salomon Brothers and the pressure insurance company managements were put under to produce high yields, a lot of companies really didn't understand the risks that they were taking in these higher yielding securities. In the commercial mortgage and the high yield areas we're in a bear market, and I believe that as insurance companies try to demonstrate to their policyholders and shareholders that they are creditworthy institutions, higher quality securities will play a much larger role.

Why do we purchase these securities? I think there are three simple reasons. The first is quality. Second is the yield in relation to other high quality securities. And last is the liquidity aspect. As to the quality issue, most of these are AAA-rated securities. This rating is often achieved by letters of credit from AAA-rated financial institutions. Two Swiss banks, UBS and Credit Suisse, have been leaders in terms of providing letters of credit (LOCs) for asset-backed securities. Sometimes you'll see financial guarantees provided by one of the monoline insurance companies. Another way to achieve a AAA quality rating is to have a large subordinate tranche which might total 8-10% of the deal, sufficient to allow the rating agencies to feel comfortable that a AAA rating is merited. As to yields in relation to Treasuries, they can range from 60 to 100 basis points over comparable maturity Treasuries. The fourth quarter of 1989 saw a tremendous supply of asset-backed securities, as many of the large banking institutions wanted to sell assets to reduce their risk adjusted capital requirements. Some transactions occurred at spreads well in excess of 100 basis points over Treasuries. The yield advantage was so substantial that on a total rate of return basis these instruments offered tremendous value. We often compare these to alternatives in the mortgage sector. There is a type of CMO tranche called a PAC bond. In these securities, the average life is stable as long as

PANEL DISCUSSION

prepayments are within a fairly wide range. Therefore, we compare asset-backed securities to similar average life PAC CMOs. Historically, ABSs have traded either at tighter or comparable spreads to Treasuries than PAC CMOs. Therefore, we use this history as a benchmark to decide whether asset-backed securities offer value at any point in time. If you compare the yields on asset-backed securities with either AAA corporates, or Euro CDs, the yield advantage is pretty substantial. You do have to consider the yield advantages in the context of liquidity. From our standpoint, other than the Treasury market, these are among the best instruments from a trading perspective. The reasons for this are multiple. One is that this is a very large market. Outstanding asset-backed securities are about \$36 billion, and a lot of the issues are almost generic, where a wide range of dealers trade them. You might have eight to ten dealers that are trading these in fairly substantial size. If you were looking at a Rockwell International corporate bond, you would not see that depth in terms of the trading and positioning which investment banks would take at this time. Second, in terms of bid/ask spreads, I think generally the market is an eighth- to a quarter-point market, and that only translates to between two and five basis points in yield, depending on maturity.

Where are these assets utilized? There are four areas. The first area includes products without significant yield pressure; I hope some of your companies have them. In the accident and health business we find that some of our clients will use these where the risks they're willing to take on the investment side do not merit moving into higher yielding, exotic securities. I don't know if any of you are involved with or have property and casualty (P&C) subsidiaries, but we find that asset-backed securities are very attractive for P&C companies because of the liability structure of most of those institutions, where the duration of the P&C liabilities might be between two and four years. We also use these for total return strategies within the context of insurance company portfolios, when we decide that with a small segment of our clients' portfolios we want to be a bit of market timers and adjust duration as our outlook on interest rates changes. We use asset-backed securities as an alternative to Treasury securities for a couple of different reasons. One is that you have more security with a higher yield than Treasuries with a small bid/ask spread, and if we're wrong about the direction of interest rates, our clients are at least holding a security that has a relatively attractive yield, particularly if they are constrained by realized capital losses. We also like ABSs compared to the mortgage sector because of their favorable convexity aspects. We find that mortgage securities, including PACs, stall out in price performance as prices exceed 102 or 103. ABSs seem to have better convexity characteristics at these levels.

Life insurers funding higher yielding liabilities such as GICs and annuities need yield to support the high cost of these liabilities. In managing the process, we try to delicately balance the risks and rewards of different asset classes. As investors have seen over the last several years, adherence to any one asset class and believing that it is the optimal solution hasn't been one of the industry's more successful strategies. Thus, to meet our clients' needs, we use ASBs as an element of our total investment strategy. These securities may represent from 10% to as much as a third of the total portfolio which supports the higher yielding liabilities that our clients are issuing. The reason we use this asset class is the quality aspect. If a regulator or a policyholder wants to look at the underlying securities backing GICs or annuity products, he will see a blended portfolio with a meaningful proportion of AAA-rated securities. Also, we like the liquidity. If there is

ASSET-BACKED SECURITIES

ever an instance of a "run on the bank" for surrenderable products such as single premium deferred annuities (SPDAs), it is very comforting to have asset-backed securities in your portfolio which you know you can liquidate with very little economic cost. In addition, the cash flow and duration of these assets effectively match liabilities such as SPDAs and GICs that many life insurance companies offer.

The fourth area is a follow-up to the high yielding liabilities. We find that ABSs can be effective instruments when we want to rebalance the duration of our assets. If we're pursuing immunization and cash-flow matching strategies with some of the liabilities, we find that these can be attractive vehicles to use to rebalance. These vehicles have reasonable transaction costs while maintaining relatively good yields.

What are some of our concerns as we buy these securities, and what should investors be aware of? Bob mentioned and Greg alluded to the asset default risk. We believe that you never can rest on a credit rating agency's view of default risk. We look at the underlying collateral. What has been the historic default experience on a Sears credit card deal or a Chrysler or a Ford automobile loan deal? The market, over time, will differentiate if problems develop. Second is the structure. From a trading perspective, hard bullets generally trade at tighter spreads than soft bullets. Also, how do early prepayment triggers impact your return characteristics? If you buy an ABS above par, run some scenario analyses on these securities to show what the yield and total return will be if an amortization event occurs. The third area, which we are very concerned with, is the credit support of these deals. You have to look at the issuing institution of the letter of credit or the financial guarantee. What is the creditworthiness of the institution? The two big letter of credit providers have been Credit Suisse and UBS, and from our standpoint those are superb institutions. Although we currently feel very comfortable with these institutions, we are skeptical in the sense that we've seen many changes in banking institutions over the last ten years. Today in the United States there is only one AAA-rated banking institution, J.P. Morgan. The banking problems that we've seen over the last six months in the northeast and other parts of the country could spread overseas, so you have to understand the creditworthiness of the letter of credit provider. If you had a dramatic downturn in the global stock markets, there are some foreign banking institutions that have a very large equity exposure. Some of the French banks are very strong financial institutions, but if you look at their balance sheets, 10% of their assets are equity securities. Look at the Japanese institutions. There you may have a similar situation. You really need to pierce through and understand the letter of credit provider, what its balance sheet looks like, and what sort of risks it is taking in running its business. You also want to understand the trend of these institutions. There are a lot of AAA international banks. A lot of them are on a very steady trend, but are some of these institutions in a downward spiral which could result in them being rated AA or lower over the next five years? What would that do to the trading relationships of some of the asset-backed securities which a company purchased?

The fourth issue which one should be aware of relates to subordinate structures where a corporate family member retains the subordinate tranche. Ford Motor and Sears are very fine institutions, but the automobile and retailing businesses are very cyclical. As Bob mentioned, Fitch downgraded one of the Sears asset-backed deals because of this

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ever an instance of a "run on the bank" for surrenderable products such as single premium deferred annuities (SPDAs), it is very comforting to have asset-backed securities in your portfolio which you know you can liquidate with very little economic cost. In addition, the cash flow and duration of these assets effectively match liabilities such as SPDAs and GICs that many life insurance companies offer.

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ASSET-BACKED SECURITIES

MR. GLEN M. GAMMILL: I'm interested in the range of consulting services that you might provide to the companies that you rate. In our profession, we have a number of situations where we might be consulting with a lot of clients and have to watch for independence. I wonder if you have the same types of issues on your side.

MR. GROSSMAN: The rating process is integrally tied with the origination and sale of these securities. So it's almost a consulting arrangement, particularly on new types of securities. When a new structure comes in, we'll have discussions with the issuer as to what the strengths and weaknesses are from a credit perspective. We are also sensitive to tax and GAAP accounting issues that the issuers, particularly the banks, must deal with. It ends up to be unlike a corporate review, where you're rating the securities based on the information.

A lot of the structuring that takes place is as a result of many constituencies, one of those constituencies being the rating agencies. We also rate private placements. That's a form of consulting. Also, certain times where the legal structure is well-developed, we may do a pool analysis. I mentioned before that there are three phases of an analysis: a pool analysis, a legal and a cash flow. In those cases where people are very comfortable with the legal analysis we may do a one-dimensional analysis. What do we think of the pool? Maybe the insurance company wants a second opinion on a new asset type. That's the range of consulting type arrangements we have. It's an ongoing process from day one. Many times issuers will come in before they even talk to their investment bankers. What do you think about this idea; is it even possible to do a deal backed by junk bonds, or something similar? A lot of the initial work is done on some of these newer issues.

MR. JEFFREY GLENN STEVENSON: What was meant by positive convexity?

MR. PARSEGHIAN: Convexity is the late-1980s term that we've devised to keep bond analysts in business. If you imagine two scenarios, one where interest rates rise by a certain amount and the other where they fall by the same amount, if price goes up more in the bull market case than it goes down in the bear market case, then we call that positive convexity, and vice versa. Dennis was saying that a lot of mortgage securities top out once they go over par. That would be an example of negative convexity, where their ability to rise in price is exceeded by their ability to fall in price. Explicitly, it's the second derivative of price with respect to yield.

MR. HALL: Believe it or not, Greg, this is probably one of the few audiences where you can talk about second derivatives of price with respect to yield, and they know what you're talking about. We could probably do a whole panel discussion on convexity. The way I like to think of it is that when you graph a security's price (on the Y-axis) as a function of market yields (on the X-axis), if that line is smiling (curving up), that's positive convexity. Everybody likes positive convexity if the price is right. If it's frowning (curving down), that's negative convexity. Generally, negative convexity is a result of options embedded in the product that serve to work against the investor as interest rates change.

PANEL DISCUSSION

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MR. PARSEGHIAN: Yes, there are risk-adjusted capital guidelines. What has been done is to decree that everything is 100% risk weighted except for several exceptions, and the exceptions are generally Treasury and/or agency-backed securities, plus a couple other types of residential housing loans. Those are the advantaged assets. Everything else, no matter how good or how bad, is lumped into this 100% risk weighted category for commercial banks. As a result, it has motivated the banks to try to sell what they can, or securitize what they can among that group. To give an example, if you assume that a pretax cost of equity for a bank is 25%, which isn't that far-fetched in today's market, it's very expensive to have equity capital applied.

I'll give you another example. Many insurance companies right now are probably trying to figure out what the NAIC rules mean for them. Another type of ABS (using a loose definition) which we haven't discussed is a collateralized bond obligation (CBO). That's obviously a financing alternative for an insurance company. If you need to reduce your junk bond exposure, and you find the junk market itself is providing unacceptable bids, one thing you can explore is to try to carve out pieces of your portfolio. You're really marrying the CMO and ABS technologies when you do a CBO. If you can sell pieces of your junk bond portfolio through that means, you'd essentially create an ABS. I would ask, "Does that really reduce the insurer's credit profile if it can sell part of its junk bond portfolio that way?"

MR. JEFFREY M. GURSKI: Concerning the default rates from the pool, who assumes the volatility of defaults away from expected? Is it the buyer of the asset-backed security? And what has been the experience so far of that effect on the asset-backed securities' yield?

MR. GROSSMAN: Typically, the first step of the analysis is determined from a rating perspective. What can you reasonably expect in different economic scenarios, especially a depression or recession? What is really the worst thing that could happen to the security? On a deal that has, say, a 3% or a 2% historical loss performance, we may feel it's necessary to get a 10% or 12% or even 14% letter of credit to cover those risks, meaning you would have to have five or six times multiple historical loss experience before you started eroding the investor's principal. On certain credit card transactions, including the Citicorp deal which I talked about, you could go from 4% losses all the way up to 30% losses before the investor starts to suffer losses. If the largest credit card lender in the United States is having 30% losses, it's a pretty Draconian scenario. But even there let's say that we're wrong and that the worst case is 31%. Well, still you're probably going to receive 99% of your principal back, unlike a corporate bond that defaults and drops to (perhaps) 40%, so that even if you are wrong, your recovery value would be much higher than on a defaulted corporate bond.

MR. MICHAEL J. KINZER: Convexity is positive, I assume, because the prepayments are not interest rate driven, that they happen regularly, and they never really change. Is that true? And does convexity differ between the different ABS structures, say auto versus credit card versus boats? Is there a dramatic difference in convexity in those products?

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MR. PARSEGHIAN: I would say that the ones that are different are the longer credit card deals. I think that the short deals, the autos, the boats, the RVs, the home equity, etc., all have prepayment rates that are relatively independent of interest rate levels and, therefore, have positive convexity. With the longer credit card deals, you have to make a decision. Do you believe that rising default rates on a credit card portfolio are correlated with interest rates? If the answer is yes, that a depression scenario is a low interest rate scenario, and that's when you get the higher probability of the early redemptions, then your answer would be yes, they do have less convexity. If your answer is no, that default rates are independent of interest rates, then your answer would be that their convexity is just as good. But that's a matter of opinion, and we don't have enough data to really be able to tell you. I do know that the last time there were high default rates, as high as today, was back in 1980-81 when we had a very high interest rate environment accompanying the financial difficulties of the country. But is that an outlier, or is that typical? My view is that the market will tell you, and the market won't trade that type of paper well over par. So, evidently the market's concerned about it, and if you mark your portfolios to market, you're not going to have the convexity on a long credit card security, except for perhaps the J.C. Penney issue that I described. That's why I think this structure will be the standard of the market going forward.

MR. RICHEY: I think another follow-up, Mike, is that, when you look at revolving credit transactions, what is the underlying credit card? Is it a VISA or MasterCard, or is it store specific? And if it's store specific, are we talking about a Sears, or a Federated department store, or Allied, or Macy's, where there could be some risk when the corporation has undergone a leveraged buyout, and you potentially could have early redemption risk if these stores get into difficulty?

MR. GROSSMAN: The other thing is that investors should focus on how these amortization events are structured. They're not all the same. That should be an important part, not only of looking at whether you can cover all the losses, but also how tightly. Amortization events are funny. If they're drawn too loosely, you subject yourself to a deteriorating portfolio, which is bad. If they're drawn too tightly, that is to say, there's not much flexibility built in, you could get your money paid back early. So, that's probably more important these days than the credit enhancement side, since all these deals are structured to withstand 20% or 30% default rates, which are much less likely to occur.

MR. KINZER: One other quick question. The issuance of ABS deals has grown over the last five years, and they're relatively new. Has there been a deal that has been downgraded in the five-year period?

MR. GROSSMAN: The Sears was downgraded because the legal structure that it utilized made it somewhat weaker than some of the bank credit card deals which don't use that structure, or an industrial company where, as in the J.C. Penney that Greg talked about, there's a letter of credit that's used to cover the losses. So, from a legal perspective that resulted in a downgrade, but it was a modest one, to AA. We still feel they're very strong securities.

MR. STEVENSON: But wasn't that there at issue?

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MR. GROSSMAN: Well, yes, it was there, except that, when you rate one of these, there are a combination of factors. How strong are the receivables? How strong is the legal structure? What is the company's underlying rating? At the time, Sears was rated AA. We felt that we could tolerate a higher rating because Sears did isolate the receivables, but not dramatically higher because the receivables weren't isolated as well as in other types of transactions. The important thing is to disclose all the things that could change and affect the ratings. In any credit card deal, there are probably 10 or 12 items that could result in a downgrade. For example, a downgrade of the letter of credit provider would be one. That's a major one. Defaults could be higher. If anyone's providing a swap, or interest rate protection, a downgrade there might have an effect. It might not. There is a checklist that you should go through, because we may feel comfortable with a DKB or a Credit Suisse, but you might not, and you might not even know about it unless you read all the documents or the prospectus in great detail. Anyway, that's the only one to my understanding that's been downgraded. I would think that, if a large Japanese bank was downgraded, that would probably result in many of the deals being downgraded.

