CAMBRIDGE ASSOCIATES LLC

U.S. MARKET COMMENTARY

OPPORTUNISTIC CREDIT FUNDS HOPING FOR FIRE-SALE PRICES

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Opportunistic Credit Funds Hoping for Fire-Sale Prices

It is likely that the squall that blew through the credit orchards this summer has left some low-hanging fruit—perhaps mortgage securities that were hurriedly sold in July or August to meet margin calls or anticipated redemptions; or bank loans that are sitting, unwanted, on bank balance sheets. In response, several dozen money managers have come to investors seeking capital, hoping to use newly invested assets to find overlooked but still fundamentally solid paper that will offer up tasty returns when the selling momentum slows and perhaps reverses.

Of the dozens of new opportunistic vehicles looking to scoop up babies thrown out with the subprime bathwater, most aim to purchase bank loans (commonly called "leveraged loans") or mortgage-backed securities (MBS). Both groups of assets, together with the different types of funds that could benefit from credit-market dislocations, are discussed in more detail below. We also provide our estimates of the return potential for each, and offer advice on possible courses of action.

Is There an Attractive Opportunity?

We believe that if the economic environment does not deteriorate materially, skilled and well-resourced managers can earn returns similar to long-run expected equity returns (but with an upside potential that is essentially capped). To earn equity-like returns from bond-like instruments (even those selling at a discount), these managers would need to add value through security selection, deal flow, and perhaps timing the initial purchases and eventual sale of loans in the secondary market. The use of moderate leverage will also prove beneficial if the default and resale environment is benign, since the yield of the loans is perhaps 150 basis points (bps) higher than the rate we would expect most managers to pay on their borrowings. If the economic environment deteriorates materially more than the market expects, which we regard as likely, these managers may deliver low or even negative returns (although in this environment, it seems likely that equities—the most sensible source of funding for these opportunistic vehicles—would generally see more substantial losses than those of leveraged loans[1]).

The asymmetric return profile offered by these vehicles is not typically attractive (like the writer of an insurance policy or a put option, the debt investor has a limit on profits but no hard and fast limit on losses). In the case of leveraged loans in this environment, however, we think the "premium" may be sufficient to compensate for the downside risk, which we believe is less than that of equities (due to the shorter-term nature of loans and their seniority and collateralization). The opportunity in the mortgage sector is less clear to us, because of the diversity *and* complexity of investable instruments trading at battered

[1] We would anticipate that "quality" equities (which we have highlighted in several Market Commentaries, including *The Unloved Mega-Caps* and *Still Pounding the Table on Quality* from August and June 2006, respectively) will hold up very well in the next recession, given their fair valuations and defensive character, but even investors who heed our advice and strongly favor quality are unlikely to have 100% of their U.S. equity portfolio in quality stocks due to the high level of tracking error for such portfolios.

prices, but we suspect some well-resourced firms will be able to source good deals and take advantage of downgrade-motivated selling of securities.

We feel strongly that managers without demonstrated skills and resources in the loan and MBS sectors are unlikely to deliver desirable returns. In addition, poorly conceived structures and/or excessive fees also will pull down returns for many of these opportunistic vehicles.

Where Are the Hunting Grounds?

Bank Loans

Bank loans are typically floating-rate loans made to companies with below-investment-grade credit ratings. Because they do not fluctuate with interest rates, and because they are typically senior in the capital structure and collateralized by borrowers' assets, the prices of these loans in most environments are relatively stable. As credit investors became more risk averse this summer, however, the loan market swooned. Prices on existing first-lien loans dropped in July to about 96 cents on the dollar, with discounted yield spreads to maturity of roughly 275 bps over LIBOR, and they remain roughly in this range at time of publication, with muted secondary-market trading and little issuance by banks.

Bank loans represent a sizable market—larger than the high-yield bond market[2] and growing more quickly. Because of their seniority and collateral support, leveraged-loan recovery rates after a default are typically higher than those of high-yield bonds (the distribution of recovery rates for the two instruments is, in fact, nearly a mirror image, with about six of every ten loans recovering 60% or more of its value, and about six of every ten high-yield bonds recovering 40% or less of its value).[3] Default rates, on the other hand, are typically lower for loans than for bonds (Table A).[4]

Current loan prices probably make sense if default rates over the next few years move up from their current level of less than 1% to a level closer to 7%, which was reached during the recession at the beginning of this decade. The default rate history for loans is relatively short, so it provides little insight into how high defaults would go in a very poor market environment, but it is quite possible that defaults would top their level in 2001-02 because of more lax underwriting standards. Credit quality of these loans has deteriorated as the buyout frenzy caused banks and institutional loan investors to hold their nose when agreeing to fewer

[2] High-yield bonds, though they are in some ways cousins to leveraged loans (both provide debt capital for companies that are not stable enough to warrant an investment-grade credit rating), are not attractive at the present. Spreads have widened modestly since June, but not enough to compensate for the higher default risk and poor recovery prospects of these bonds.

[3] Edward I. Altman, *Investment Performance and Market Size of Defaulted Bonds and Bank Loans: 2006 Review and 2007 Outlook*, February 2007. It should be noted that the loan recovery dataset used in the comparison extends from 1996 to 2006, while the bond dataset is from 1971 to 2006.

[4] The evidence on default-rate comparisons between bonds and loans is mixed, however. Moody's, for example, reported in 2004 that for firms with both loans and bonds outstanding, the loans were more likely to default than the bonds, although the greater recovery levels of the loans produced lower total losses for the average company's loanholders than its bondholders.

covenants and lower interest-coverage ratios (Table B). In the absence of a U.S. or global recession, however, current prices may well be too low relative to fundamentals.

There is a substantial supply overhang, which has certainly factored into the recent loan price declines and could put additional pressure on loan prices going forward. The heady buyout pace of 2006 has ground to a halt, but many announced buyouts are still scheduled to close, with guaranteed bank financing. As recently as July, banks had about $230 billion in outstanding loan commitments (and billions more in fixed rate bond financing commitments). Some managers speculate that banks may feel pressured to unload their warehoused loans in bulk at a large discount to an opportunistic investor, so as to free up their balance sheet for more productive purposes (including new, fee-generative loans) and clear the overhang from the market. On the other hand, if banks feel that borrowers will continue to remain current on their payments and that repayment or prepayment is much more likely than default, they may be tempted to hold on to the loans rather than recognizing a loss on them.

Mortgage Securities

Residential MBS (in particular, those without any backing from the government or from government-chartered agencies) have undergone a massive and well-publicized upheaval so far this year.

Rising interest rates and falling home prices, joined by abysmal underwriting of subprime and Alt-A home mortgages in 2005, 2006, and the first months of 2007, have resulted in skyrocketing mortgage delinquencies, defaults, and home foreclosures so far this year (Tables C through E). As a result, investment managers have been playing “hot potato” with non-agency mortgage-related securities and mortgage derivatives. Ratings of A, AA, or AAA by the three major credit raters seemed to imply that these securities were bulletproof, but they are proving to not even be popgun-proof. A-rated ABX securities tied to subprime mortgages issued in the second half of 2006 have traded in some cases down to 52 cents on the dollar .

Some owners of subprime securities are holding on to them (whether by choice, because the bids coming in from potential buyers are so anemic, or by necessity, since they may be seeing no bids at all), and any future ratings downgrades are likely to cause sporadic bouts of forced selling, since some current owners are restricted to high-credit-quality assets. The fundamentals of many non-agency mortgage securities are undoubtedly poor, but if the technicals are far worse than the fundamentals, that may present opportunities to savvy, patient buyers.

On a side note, many hedge funds, and many of the managers raising money for opportunistic funds, have been participating in the loan market, but fewer appear to have experience with exotic mortgage securities and mortgage derivatives, so it is possible that the mortgage sector will see fewer bargain hunters and therefore will be less picked over than the loan sector after these funds begin putting their capital to work.

What Vehicles May Target the Opportunities?

Dedicated Opportunistic Funds

Several dozen managers in August and September announced the formation of investment vehicles that aim to target investment opportunities created by this summer's credit-market dislocations. The terms of these vehicles, including structure and time horizon, length of lockup, and carried interest charges, vary widely. Target leverage ranges from zero to 7:1, with many of the products likely to lever between 20% and 100%.

What is our opinion of these funds? It greatly depends on the manager and the terms, but Cambridge Associates has met with several promising managers over the past two months. The marketing period in many cases has been quite short, and some attractive funds that were not marketed until August have already closed. The limited window with which to conduct due diligence was and is a concern for us, and this is particularly true for funds with multi-year lockups.

The newly hatched opportunistic funds that we have liked generally are run by managers with many years of experience owning or trading the targeted assets (generally leveraged loans or mortgage securities), and they have terms and structures that are fair and that minimize the possibility of deleterious margin calls or redemption-motivated selling. A manager with a very deep mortgage team and strong relationships with market participants is likely to be able to sniff out bargains in the expanding junkpile of mortgage securities. Similarly, managers that have long been participating in the leveraged-loan market may have both a reputation as a willing buyer and a strong network of relationships with originating banks, helping to ensure deal flow.

An additional key consideration is the element of market timing that is involved in funding one of these opportunistic funds. Some are likely to put the money to work within a few months or perhaps even weeks of closing, and an investment in those funds is in some ways a market-timing decision by the investor. Others will draw down capital over the course of a year or more, and in that case the investor is delegating the market-timing decision to the fund's manager to some degree. In either case, however, there is no assurance that cheap paper will not get cheaper after it is purchased. These funds all have finite lives, although some make provisions for an extension if necessary. With most of these vehicles, some securities will ultimately have to be resold in the secondary market. The lockup structures of the best of these vehicles should protect investors from each other, so that if today's bargains get even cheaper, funds are not forced to sell them off at their low points in order to meet redemptions.

Hedge Funds

Many hedge fund managers have opened new funds that will attempt to profit from market dislocation, but our manager research teams believe that a number of these managers have not demonstrated that they have differentiated skills in the mortgage or loan markets to warrant such a specialized vehicle. Locking up dedicated opportunistic capital (even if the investor is eager to commit capital to the market

opportunity) is not an ideal approach, if the sponsoring manager's credit skills and bench strength do not inspire confidence. Investors who choose not to deploy additional capital to the credit dislocation can still profit from it as agile open-mandate or multi-strategy funds step in to take advantage of market hiccups if they have skill and expertise in these markets. Since hedge funds are ongoing concerns, they should have more flexibility in timing the opportunity. Investors with hedge fund managers of this sort need not lock up additional earmarked funds in order to get exposure to these assets.

Distressed Funds

While some investors may refer to the above opportunistic vehicles as "distressed funds," we would distinguish between these funds and classic distressed funds. Traditional distressed funds are more likely to be buying defaulted bonds (or bonds that are not yet in default but that may be trading at yield spreads of 20 percentage points over Treasuries). These funds often have strong legal resources and experience navigating bankruptcy proceedings.

We said in March to "get ready for the next distressed cycle." Are we there yet? No. The level of defaults is still very low. This is in part due to the reasonably strong economy, and especially due to the ease, until recent months, of refinancing existing debt. If you do not know true distressed managers (or multi-strategy hedge fund managers that can perform well in a robust distressed environment), find them and fund them now. While there is not a large supply of defaulted or deeply distressed bonds currently, given the generally low quality of issuance in recent years there is likely to be plenty to go around in the not-too-distant future. Now is the time to find managers that can call down additional capital as opportunities present themselves (or in the case of multi-strategy managers, re-allocate capital from elsewhere in the portfolio).

What Is the Return Potential?

What kinds of returns are possible for the buyers of leveraged loans? A simplified model incorporating numerous scenarios of defaults and recoveries (but not incorporating the potential benefit of a manager's security selection) indicates that an investment in a portfolio of loans at current prices of roughly 96 cents on the dollar, held until they prepay or default and are sold at the end of three years, would likely produce returns without leverage that are a bit lower than our long-term equity return assumptions (Table F). This model suggests that annualized returns, unlevered and net of 60 bps in management fees, might range from 7% to 9% in moderate market environments.[5] The ability to apply portfolio leverage of perhaps 1:1 (as several of the vehicles plan to) could reasonably result in annualized gross returns of 8% to 11%. Annualized net returns higher than 12% are unlikely at moderate leverage levels unless one of three rosy scenarios ensues: (1) prepayments are high and defaults remain at their low level, (2) prices snap back to near par in a year or less, or (3) loan prices fall sharply between now and the time the funds deploy their capital. "Perfect

[5] This model is relatively basic, and is sensitive to changes in prepayment speed, assumed default rates, recovery rates, and ending prices. The scenario shown in the model's "very unfavorable" environment is intended to reflect potential market conditions that are even more difficult than the worst outcomes that loan owners have ever experienced in the relatively short life of the loan market.

storm" conditions, of course, with high defaults, low recoveries, and limited resale opportunities, could result in some losses, which would likely be occurring simultaneously with equity losses elsewhere in an investor's portfolio (equity losses likely will be much worse in such a poor market environment, although quality equities should hold up reasonably well).

Because equities in general are overvalued with profits near or past their cyclical peaks, leveraged loans may well outperform equities over the next few years, even if loans underperform our *long-term* equity return assumptions. A recession would likely result in moderate losses for loans and heavier losses for equities overall; a market that shows neither improvement *nor* deterioration might favor loans over the broad equity market (given high equity earnings multiples and low dividend yields versus high coupon income for loans); while during a market in which the economy strengthens further and equities roar ahead, loans will likely lag far behind, but with returns that are above the long-run real spending needs of most institutions.

Evaluating return possibilities in the mortgage space is more difficult for us. The range of securities that a manager could target is quite large (Table G), the securities have many moving parts that are difficult to model, and some securities contain embedded leverage. Our very rough assessment, based on speaking with managers (and discounting their unbridled optimism a bit), is that annualized gross returns over the next few years may well exceed 15% to 20% for the top managers using moderate portfolio-level leverage of perhaps 25%, but the downside risk in these securities is still quite present. Evaluating unlevered returns would be useful as a point of comparison, but is not feasible given the breadth of securities and the unknown degree of leverage embedded in many of these.

Returns generated by traditional distressed managers vary widely. Annualized returns for the distressed managers in our database that operate within a hedge fund structure have averaged about 14% over the years, and in particularly good years for the strategy (such as 1996 and 2003) 20% returns have been commonplace. The beta return from passively owning the full universe of busted bonds has not been particularly attractive; the best managers generate value in security selection and, often, in "working" their positions to get the best possible seat at the creditors' table.

Our Advice

The market's credit-based dislocation this summer has created some value. As credit-market participants did their best to sell the truckloads of newly unmarketable dreck in their portfolios (in order to de-lever or to prepare for margin calls and redemptions), there was some collateral damage. Managers with real skill have an opportunity to create value. As we noted before, investors with appropriately skilled and nimble hedge fund managers most likely already have the resources necessary to jump on existing and future credit opportunities.

Investors who are not getting exposure via existing hedge funds, or who desire additional exposure, could commit a modest amount of capital to a familiar and well-seasoned manager offering reasonable terms

in a dedicated opportunistic vehicle (again, we would caution that some of the most attractive such offerings have opened and closed in a matter of weeks).

Where would the money come from? The capital required for a modest allocation to an opportunistic vehicle could reasonably come from long-short equity hedge funds, or from marketable equities, but be aware that lockups in several of the opportunistic vehicles are multi-year. We would caution against using bonds as a funding source, particularly if the portfolio's bond allocation is designed to provide some protection against prolonged economic weakness or deflation.[6] Investors who have not heeded our advice and retain allocations to highly overvalued credits, such as emerging markets bonds and high-yield bonds, may consider selling some of those assets to fund an investment in these opportunistic vehicles.[7]

On the other hand, this is not a once-in-a-lifetime opportunity (not even a once-in-a-credit-cycle opportunity). Traditional distressed vehicles will likely have their day in the sun within the next few years. Holding out for that time, with capital ready to be deployed (rather than locked into a new opportunistic fund), is a perfectly reasonable choice as well.

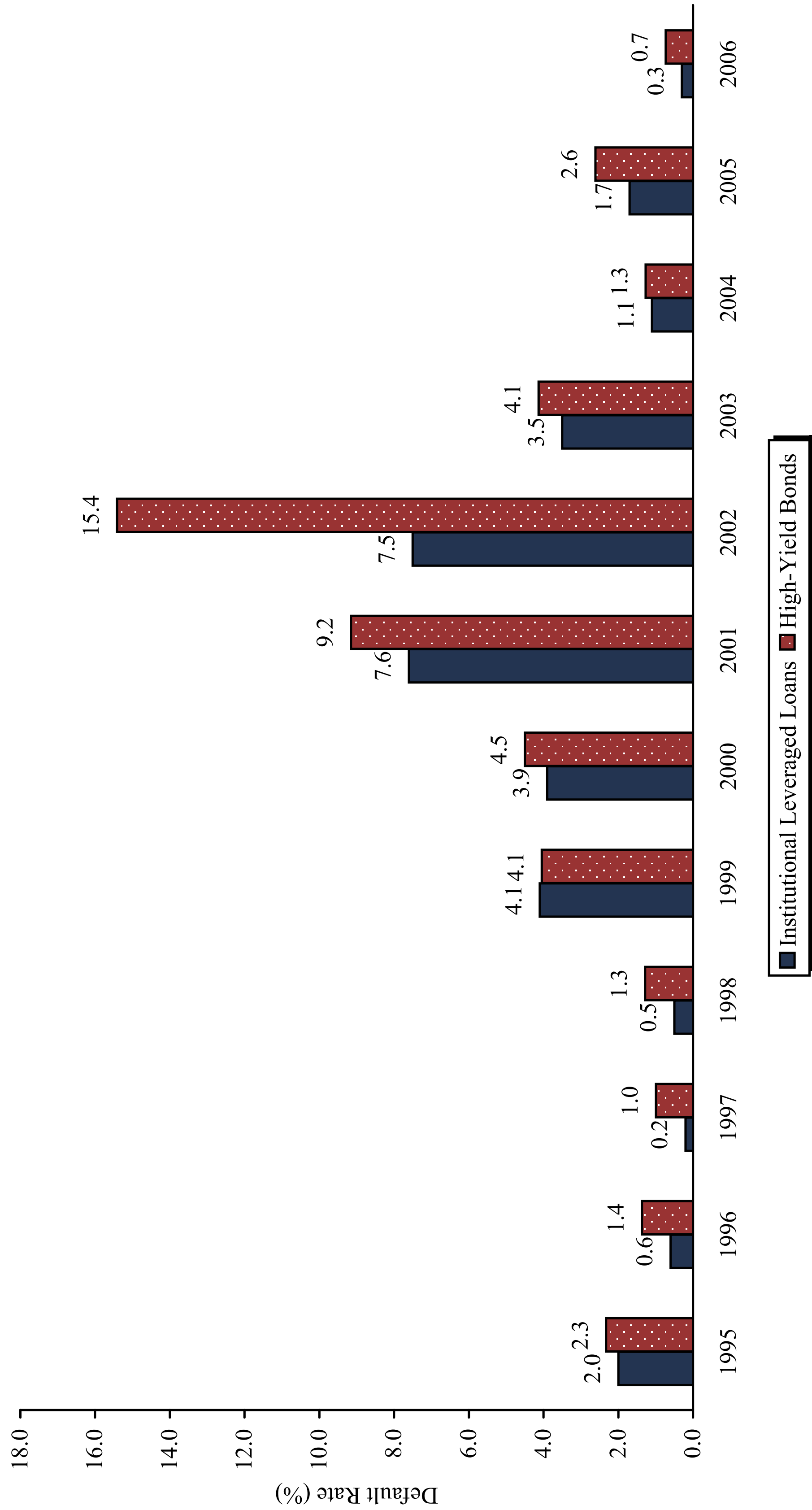
[6] The return of these vehicles will have little relation to equity indices, so a more appropriate benchmark may be simply an absolute return target (Treasury bills plus 5%, for example). We would suggest, given the degree of illiquidity and most investors' unfamiliarity of with the assets, that allocations, if desired, should be kept modest (e.g., less than 5% of the portfolio).

[7] Investors who currently have a large allocation to a core-plus bond manager might consider trimming that core-plus allocation, and using some of the redemption proceeds to fund an opportunistic vehicle, with the lion's share of the proceeds moved into long-duration sovereign bonds.

Table A

U.S. INSTITUTIONAL LEVERAGED LOAN VS HIGH-YIELD DEFAULT RATES

1995-2006

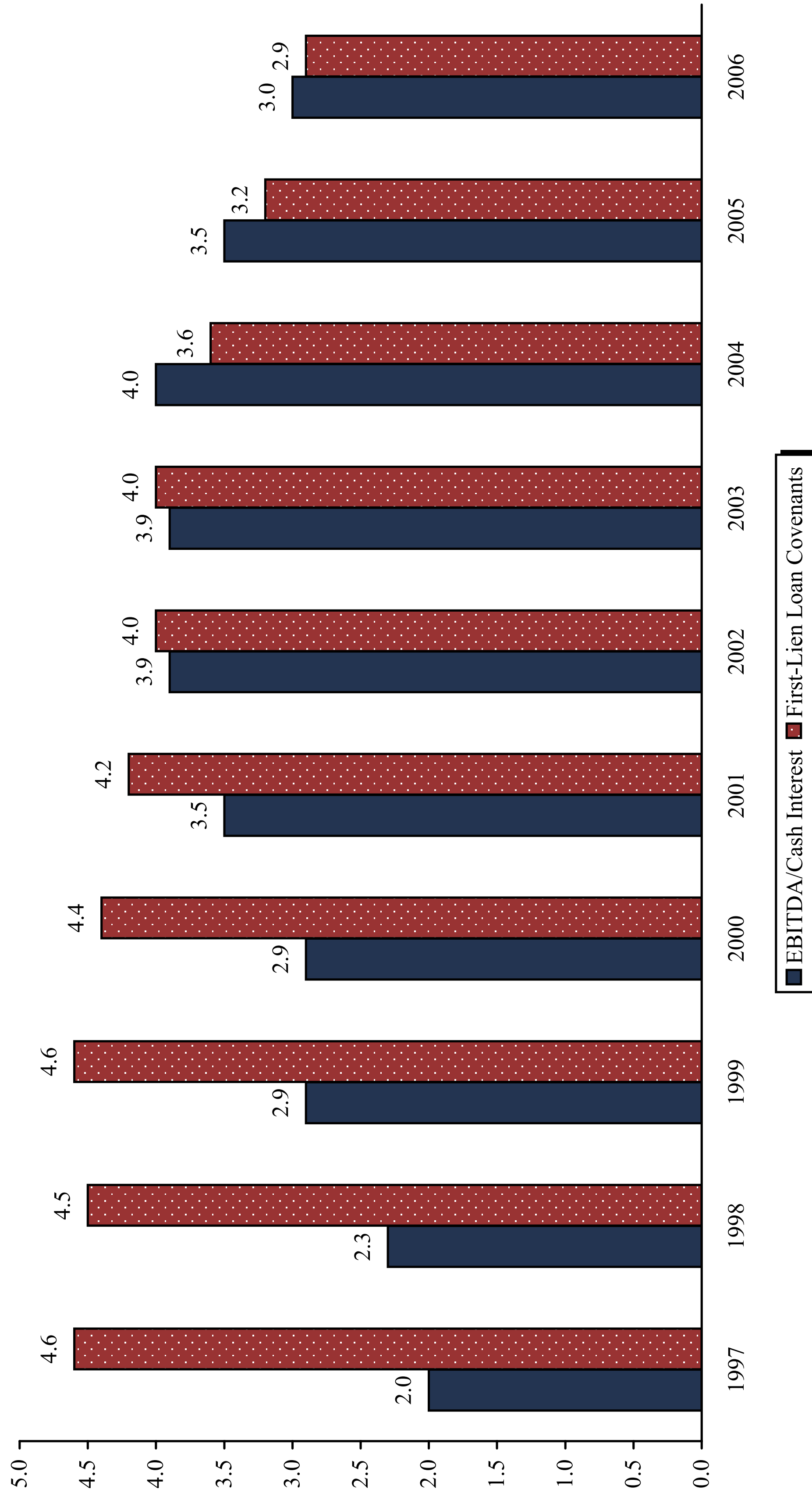


Source: Credit Suisse.

Table B

AVERAGE INTEREST-COVERAGE RATIO OF HIGHLY LEVERAGED LOANS VS AVERAGE NUMBER OF FIRST-LIEN LOAN COVENANTS

1997-2006

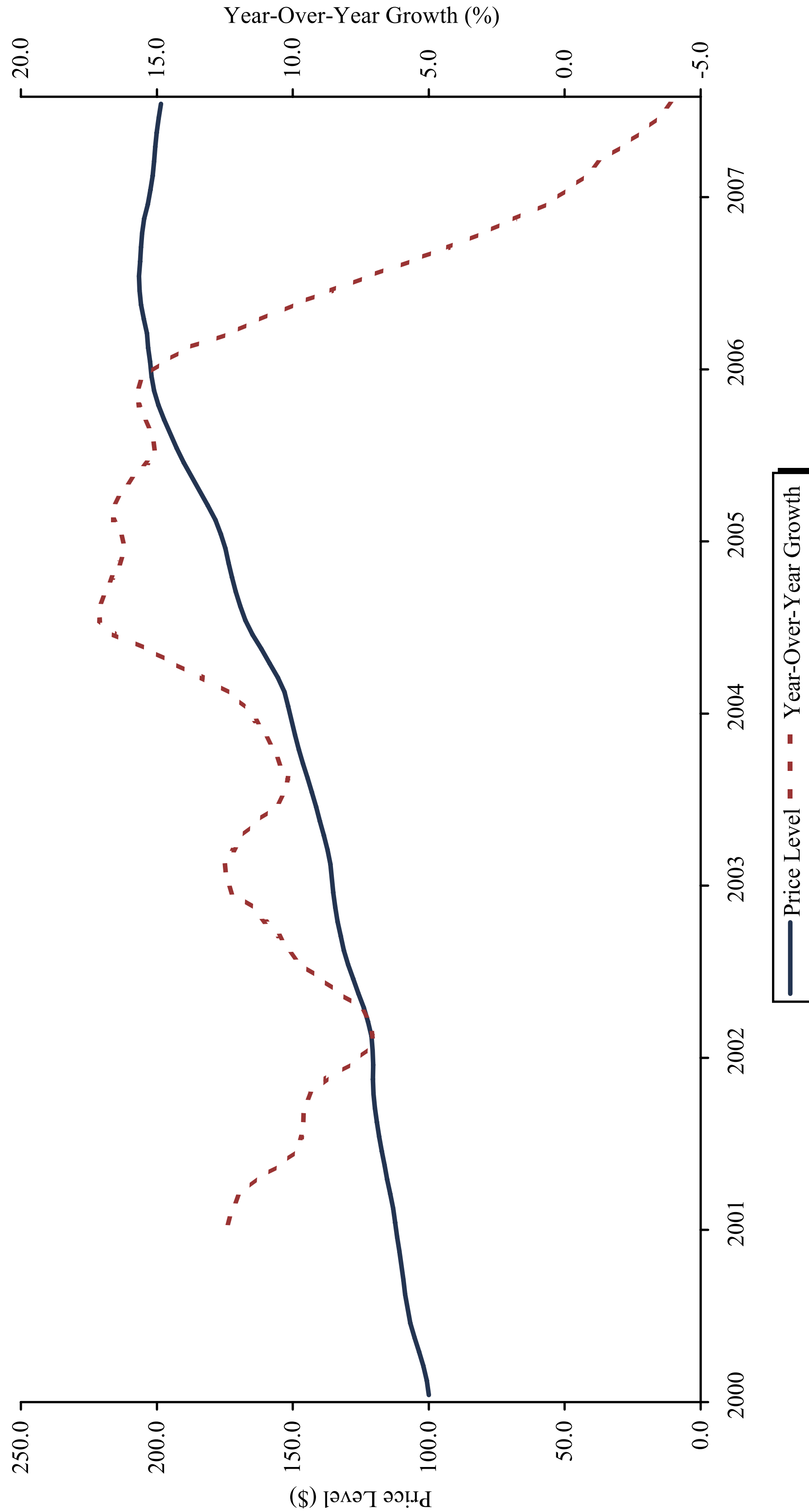


Sources: Credit Suisse and S&P LCD.

Table C

S&P/CASE-SHILLER HOME PRICE INDEX: COMPOSITE 20

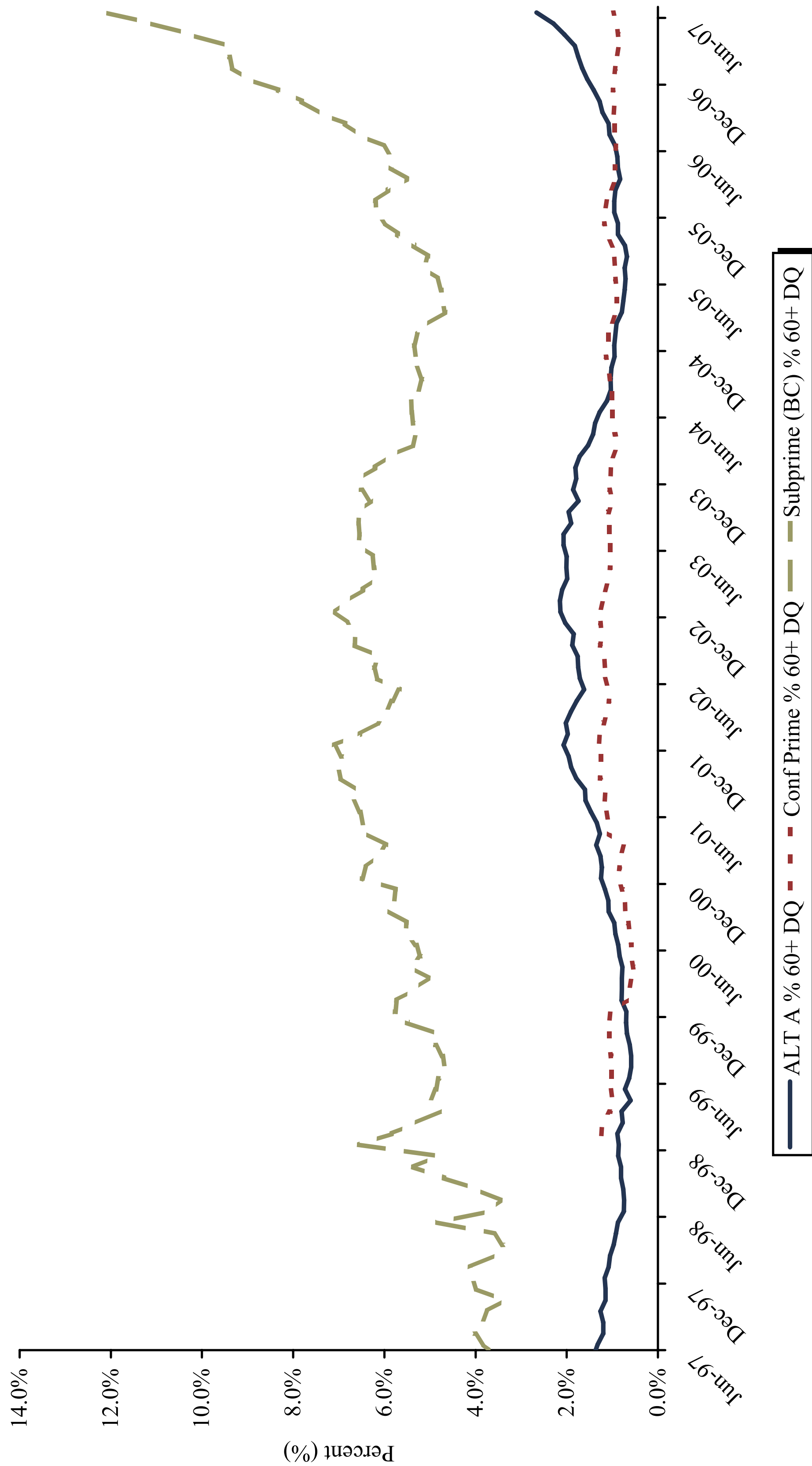
January 1, 2000 - July 31, 2007



Source: Standard & Poor's.

Table D

PERCENTAGE OF LOANS THAT ARE 60+ DAYS DELINQUENT



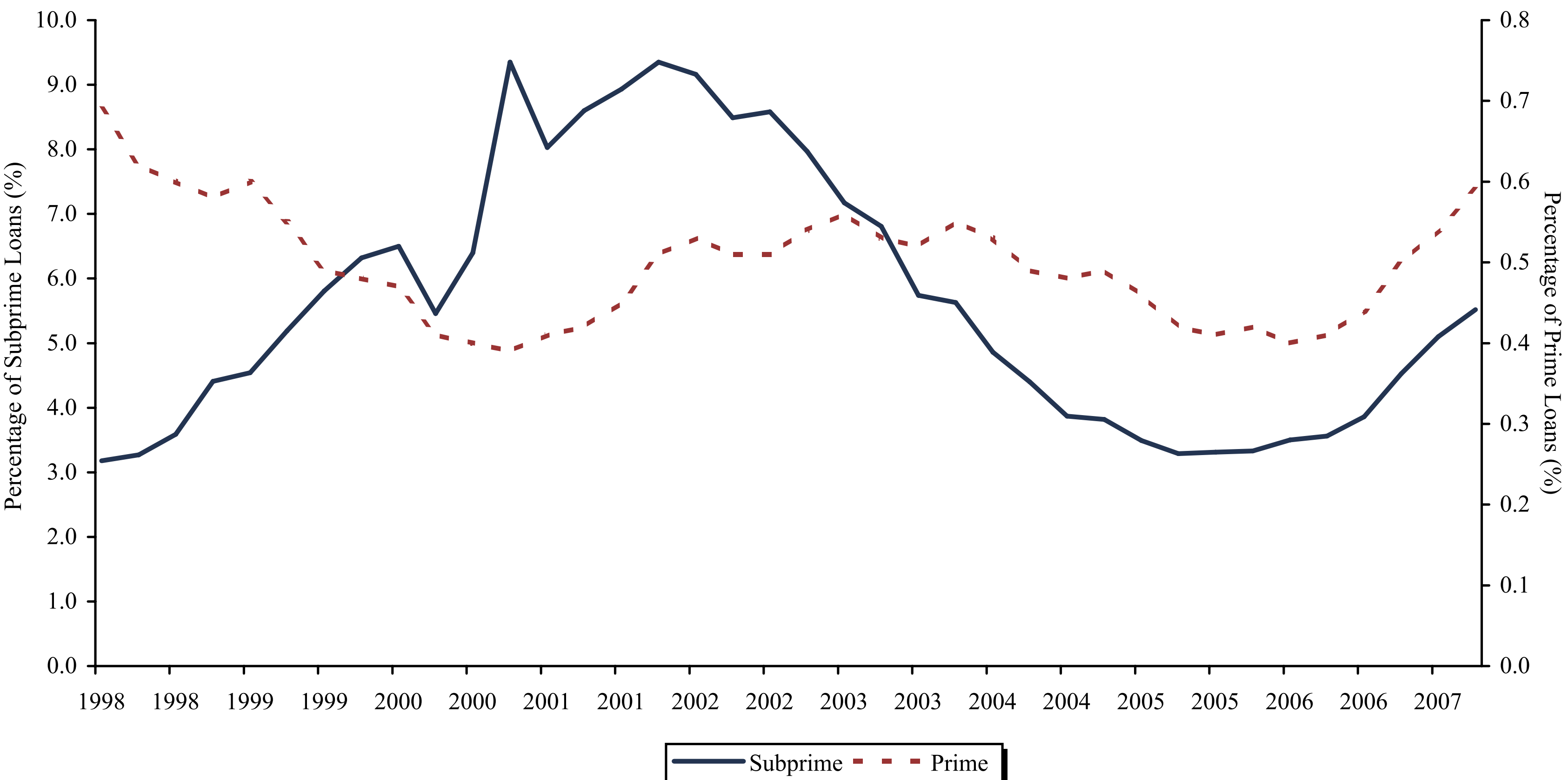
Sources: First American LoanPerformance.

Note: Data are through June 2007.

Table E

FORECLOSURES AS A PERCENTAGE OF PRIME AND SUBPRIME LOANS

January 1, 1998 - June 30, 2007



Sources: Bloomberg and Mortgage Bankers Association.

Note: Graph represents quarterly data through June 30, 2007.

Table F

ESTIMATED RETURNS IN FOUR LEVERAGED-LOAN MARKET ENVIRONMENTS

Characterization of Loan Market Environment	Very Favorable	Moderately Favorable	Unfavorable	Very Unfavorable
Purchase Price of Loans	$0.96	$0.96	$0.96	$0.96
Sales Price of Remaining Loans at End of Year Three	$0.99	$0.98	$0.97	$0.93
Prepayment Rate	35.0%	25.0%	20.0%	5.0%
12-Month Default Rate	2.0%	3.0%	6.0%	10.0%
Recovery Rate on Defaulted Loans	90.0%	80.0%	70.0%	60.0%
Management Fee (as a Percent of Assets)	0.6%	0.6%	0.6%	0.6%
IRR (No Leverage)	10.0%	8.9%	7.2%	2.9%
IRR (with Leverage - $2 in Assets Purchased per $1 of Invested Capital)	13.6%	11.4%	8.0%	-0.5%

Source: Cambridge Associates LLC.

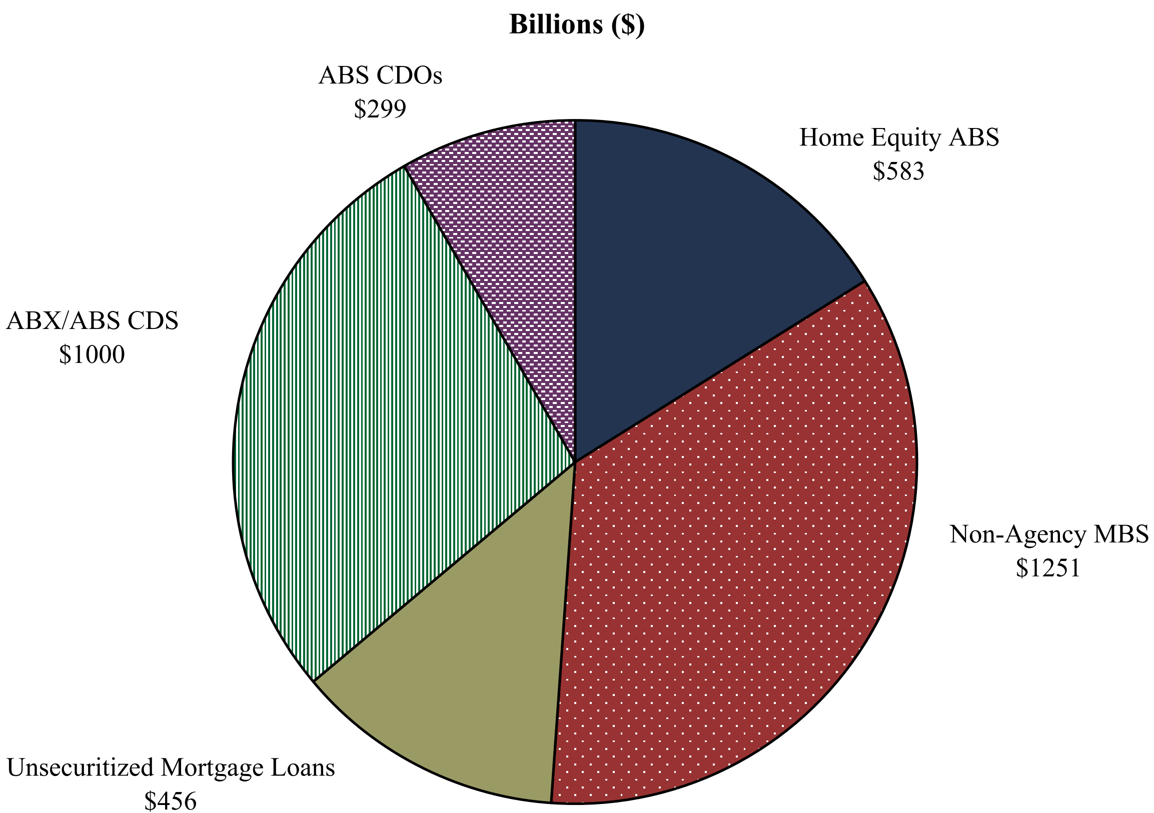
Notes: Data are based on estimates. Prepayments, defaults, loan interest payments, and management fees are allocated quarterly and are equal across the three-year period of the investment. Loans are non-amortizing and earn 780 basis points (bps) in interest; margin debt costs 620 bps and the leverage ratio is maintained at approximately 1:1 throughout the time of the investment. Remaining cash flows are distributed to limited partners and no re-investment is assumed. Returns from actual products may differ materially from these simplified estimates.

Table G

NON-AGENCY MORTGAGE SECURITIES OPPORTUNITY SET

As of March 31, 2007

Billions ($)



Sources: PIMCO, SIFMA, and UBS.

Note: ABX/ABS CDS size is an estimate of the outstanding notional.