



C A M B R I D G E A S S O C I A T E S L L C

## U.S. MARKET COMMENTARY

### DISTRESSED INVESTING

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## Introduction

As the global economic backdrop continues to worsen (although it appears to be deteriorating at a slower rate of change), investors have continued reasons for pessimism and concern. Consumers in developed countries continue to be cautious about spending on nonessentials as layoffs mount, and much of the recent improvement in credit markets is courtesy of government initiatives that depend on the continued support of the bond vigilantes. The gloomy economic backdrop contrasts with a rapid rebound in the prices of risk assets, which suddenly look sparkingly attractive to many investors, rather than horribly tainted as they did just a few months ago.

The rapid pace of deleveraging and the degree of investor disillusionment caused many bargains to appear in many places late in 2008. The universe of distressed securities (traditionally, bonds that are trading at yields of at least 1,000 basis points [bps] higher than Treasuries) has increased exponentially since last September. Many of these securities have rallied sharply since year-end, but in some cases prices remain low enough that investors could see positive and indeed attractive returns, even if dismal outcomes come to pass. Our discussion below of historical return opportunities looks at corporate securities only (focusing on control-oriented distressed securities partnerships and on high-yield bonds). The universe of non-agency mortgage securities has changed radically in the past decade, with no recent precedent for significant levels of nominal home price depreciation on a national basis, and therefore meaningful performance comparisons to prior historical periods are not available to us.

We generally prefer to be an equity shareholder than a lender to businesses, and we view corporate credit as an opportunistic rather than perpetual investment (prior to 2008, for example, the last time we got even remotely excited about high-yield bonds was just after defaults peaked in 2002<sup>1</sup>). One of the important reasons for our tactical approach to credit is that, unlike many investment professionals, we generally view credit as a substitute for equity, rather than as a substitute for Treasury bonds. Treasury bonds are generally held as a means to protect equity-dominated portfolios against severe economic contraction. Investors should want to maintain such bonds during periods in which debt prices reach distressed levels rather than dilute the bond portfolio's defensive capabilities. Current markets are sufficiently dislocated that we view this period as presenting an opportunity to achieve equity-like returns from credit instruments.

The following commentary will focus primarily on control-oriented private distressed debt partnerships, below-investment-grade loans to corporations (referred to as "bank loans" or "leveraged loans"), high-yield bonds, and residential mortgage-backed securities (RMBS). In each case, we evaluate the investment opportunity, which should be appropriately compared to the opportunity for equity investors.

In prior cycles for distressed credit investments, the best returns have come when investors are fearful and spreads are wide. Table A, for example, illustrates that investing in control-oriented distressed

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<sup>1</sup> See our December 2002 Market Commentary *U.S. High-Yield Bonds: Head Fake or Bull Market?* Our enthusiasm quickly waned as high-yield bonds returned 20% during the first eight months of 2003 (more than double the return of the S&P 500), and our August 2003 Market Commentary on the topic, *U.S. High-Yield Bonds: Check the Exits*, was rather cautious.

securities partnerships when high-yield bond spreads are wide (and prices of distressed securities in the secondary market are generally low) historically has been an excellent strategy. During years when high-yield bond spreads average more than 750 bps, the *median* fund incepted then has generated an internal rate of return of 21.3, higher than the *top-quartile* return of funds incepted during other yield spread regimes. (The average yield spread over ten-year Treasuries in 2008 was nearly 1,000 bps and 2009 will likely exceed last year's average.) Similarly, the two charts in Table B illustrate that high-yield bonds historically have tended to outperform equities directly following periods when yield spreads are high. Going back to 1987 and looking at the performance of high-yield bonds and the S&P 500, an investor that allocated to high-yield bonds only during months when initial spreads were below 600 bps would have seen the high-yield investment eventually outperform equities during the year following the initial investment only 28% of the time. If that investor instead allocated to high-yield bonds only during months when the beginning spread was greater than 600 bps, the chance of beating equities over the next year nearly tripled, with high-yield bonds beating equities 77% of the time.

The yield-spread environment in place today has historically produced returns that were solid in an absolute perspective and that outperformed equities in the near term. That said, recent price appreciation has been extremely strong, and the market may have gotten ahead of itself. The Merrill Lynch High Yield Distressed Index, which includes bonds priced to yield at least 1,000 bps higher than comparable Treasuries, returned 16.8% in April and 14.4% in May—the two best monthly returns for the index since data became available in 1997. The broader Merrill Lynch High Yield Master II Index returned 11.5% in April and 7.1% in May, the highest and fourth-highest months, respectively, in the history of the index. But even following the dramatic recent price appreciation, prices of high-yield bonds and of leveraged loans are at levels similar to the trough lows of prior cycles. The average price of issues in the Merrill High Yield Master II is 76 cents on the dollar, equal to the low price the index reached in late 2001 and again in late 2002. The amount of distress in late 2008 was so extreme that even following an exceptionally strong rally, prices of below-investment-grade debt remain below the point where they have previously *started* to rebound.

If the recession is already over (we do not know but strongly doubt it) and if equities have seen their low point (we simply do not know), it is quite possible that equities will outperform credit. Equities get essentially all of a company's future earnings, after creditors and the tax man have taken their cut; whereas creditors get back interest plus par value in most scenarios, and interest plus something less than par value in adverse scenarios. In an environment when upside is the only thing on investor's minds, equities will probably win out (particularly equities of low-quality, leveraged entities). If equities are not yet in the clear, we believe that credit will continue to win out in the performance derby, even as the rate and severity of defaults hits levels not seen in decades.

Long story short, we believe investors with the resources to select and access strong managers, and with a governance structure or meeting frequency allowing a tactical investment approach, may wish to consider credit investments if they have not already. Before making a commitment, ask managers tough questions about liquidity, capacity, and trading costs (this is particularly important for larger investors establishing a separate account). For investors that made credit investments last fall or earlier this year, prices

may backtrack and revisit prior levels, but we feel that exposure to credit (funded from equities) remains attractive.

### **Debt for Control/Turnaround**

This strategy is commonly used by private equity–style, lock-up managers. These funds attempt to become the largest and most influential investor in corporate restructurings by gaining control of distressed debt that is the “fulcrum” security to which control ownership will be granted. This opportunity typically follows a default on company debts stemming from the failure to pay principal or interest, breaching protective covenants, or the inability to refinance maturing obligations. The investment managers then do what most traditional private equity managers do: they design strategy, hire key managers, focus on cost cutting, and sell unwanted assets. The difference in the distressed area, of course, is that these managers are dealing with very highly leveraged, often bankrupt, companies that have lost momentum and market share along with losing their shareholders’ capital.

Historically, this has been a more straightforward endeavor than it is today. In past cycles, sector bubbles were more concentrated, such as the tech bust earlier this decade or the Asian non-performing loan crisis over ten years ago. The fulcrum securities were readily identifiable and smaller loan syndicates made restructuring plans easier to execute. Debtor-in-possession (DIP) financing was plentiful and relatively inexpensive in the range of Libor plus 400 bps.

Distressed for control investors have significant challenges to navigate in the current market. The landscape of opportunity is broader since so many sectors of the global economy are under duress. While that is an attractive feature to managers and investors alike, it places a premium on careful target selection because relative value is harder to discern when so many sectors are in play. In addition, the holders of debt securities have proliferated around the globe, and include complex structures such as collateralized loan obligations (CLOs). As a result, the efficiency and success of workouts and restructurings may be hindered. Obtaining the fulcrum security is now more complicated and expensive due to the wide dispersion of creditors, and the myriad jurisdictions in which securities are held and potentially litigated. These factors can make such deals more time consuming and less profitable in the long run.

Managers must now garner targeted returns from operational improvements and cost control, not from exit multiple expansion or financial ingenuity. Moreover, the DIP financing market has contracted and become far more expensive today, thus forcing creditors to participate in the restructurings and potentially crowding out distressed for control buyers in some attractive deals.

We also see warning flags from recent activity by the U.S. government and our court system. The bankruptcy process has become less predictable as the government has intervened in unconventional ways in sectors such as autos and financial services. By selectively bailing out some but not others, providing cheap financing to certain sectors, and supporting unions, the government has forced some investors to be extremely cautious as they analyze new targets.

Another note of caution pertains to the investment managers directly. Some traditional private equity firms have shifted their strategies to emphasize debt and distressed investments in their portfolios. This raises questions about their original strategy and the skill set resident at their firms. Meanwhile, the performance of some highly leveraged, but previously healthy, companies has deteriorated sharply, thus moving them into the distressed category. Even some dedicated distressed private equity managers have invested too early in this cycle, saddling them with less successful and more resource-consuming portfolios than they had anticipated.

Despite these challenges, our outlook for opportunities in this segment is generally positive as the weak economic cycle continues to unfold. In 2008, there were 138 public bankruptcies, up from only 66 in 2006. We expect this trend to continue unabated as bank loan and high-yield bond defaults are anticipated to reach double digits this year and next due to high levels of corporate leverage and the recessionary environment. Also, hundreds of billions of dollars of debt maturities will hit the market over the next few years as the leveraged buyout (LBO) boom unwinds and sponsors are forced to restructure debt, or sell assets, when their five- and seven-year term loans expire (Table C). This will create ample supply for well-positioned and patient distressed buyers. Investors may have to temper their return expectations as managers will use less leverage to acquire bankrupt assets, their holding periods may be longer, and they will not be able to rely on financial engineering to fashion quick and profitable exits.

## **Bank Loans**

The bank loan market is relatively new in the annals of financial markets history. The actively traded market we invest in today originated only in the 1990s. Following the excesses of the 1980s Drexel Burnham Lambert junk bond era, the Federal Reserve tightened its restrictions on national banks that made and held high-yield loans, known at that time as highly leveraged transactions. A national syndication desk magically developed at every money center bank as they realized it was far more profitable, and less irritating to regulators, if they sold parts of their loan book for such risky credits. Banks got creative and added features that enticed issuers, such as extended amortization periods, while aggressively courting nonbank institutional investors to expand the pool of potential buyers. In the middle part of the 1990s, two watershed developments cemented the path of the bank loan market. First, a nonprofit industry trade association, called the Loan Syndication & Trading Association, was formed to issue guidelines on documentation, pricing, trading standards, and settlement. Second, Goldman Sachs built a comprehensive bank loan syndication and trading platform, and a new investment class was now blessed by Wall Street for dynamic growth. (See Table D.)

It is important to understand why bank loans have been, and remain, an attractive asset class. Their key features include: seniority within the capital structure, collateral for downside protection, protective covenants to monitor corporate performance, and floating interest rates tied to Libor to reduce or eliminate interest rate risk. The loans most often have a maturity of five to seven years and are callable at any time, although some have prepayment penalties to compensate investors. Such features are in contrast to high-yield

bonds that are subordinate in the capital structure, offer no collateral, and provide limited covenants, while offering a fixed-rate obligation for seven to ten years.

The size of the U.S. market is roughly \$600 billion in tradable loans to mostly below-investment-grade credits. The actual bank loan market is much larger at \$1.6 trillion, but historically banks have kept much of that on their balance sheets since that is their primary business and revolving credits cannot be easily packaged for sale. The European market is about half the size of the U.S. market. Almost two-thirds of this market developed over the past five years to support the massive LBO boom earlier in this decade. Prior to that, the market was not even half as big as it is now. Bank loans are traded by appointment among dealers and institutional sellers; there is no organized exchange for these assets. In addition, they have a low correlation to other asset classes, with the highest correlation to high-yield bonds (as might be expected) at 0.68 for the period January 1992 to March of this year.

So why are bank loans so interesting today? Asset management firms, hedge funds, and dedicated bank loan managers have been raising funds feverishly to capitalize on a historic dislocation in loan prices. Because Wall Street syndication desks were so effective, hundreds of billions of dollars in LBO debt was sold to institutional investors all over the world as referenced earlier. Buyers included foreign banks, insurance companies, credit and multi-strategy hedge funds, and CLOs, which ultimately accounted for 60% of the market before their demise last year. Enormous technical selling pressure forced the unwinding of market value CLOs while, simultaneously, banks had to reduce their unsold inventory to raise capital for their fragile balance sheets. Also, some investors, such as hedge funds, purchased bank loans with leverage and were subsequently forced to unwind their positions to meet margin calls and investor redemptions.

As a result, the bank loan market tanked. In June 2007, 97% of bank loans traded between 90 cents on the dollar and par; in June 2008, still nearly 70% traded over 90; by December 2008, only 7% of the bank loan market traded over 90 (Table E). This is remarkable for an asset class that never had a losing year. In 2008, the Credit Suisse Leveraged Loan Index dropped 28.8%.

Today, prices in the bank loan market remain undervalued. However, they have firmed significantly. In the first quarter, the bank loan market stabilized as investors drew comfort from investing in senior securities of corporations, increased optimism about an economic recovery, and the flow of funds into the market. Also, the forced selling so prevalent last year has abated for now. Mark-to-market accounting rules have softened, allowing banks more flexibility; hedge fund gates have allowed managers to slow the pace of selling; and many of the most desperate margin sellers washed through the market in fourth quarter last year.

Through the end of May, the Credit Suisse Leveraged Loan Index improved to 73.6% of par value, up 18.2% from year-end levels, with a 22.4% year-to-date return. The largest credits in the index (those over \$1 billion), meanwhile, improved to 74.4%, up 20.1% from December 2008, while spreads to Libor have dropped to 1,134 bps, well below the December levels of around 1,847 bps (Table F).

According to many managers, there is a growing disparity in price changes across the credit spectrum. Higher-rated credits are trading more frequently and with tighter spreads than weaker companies.



This is a healthy development. Some managers report that three levels of pricing have emerged. The stronger companies are trading at 80% to 90% of par, the middle-tier credits are trading at 50% to 75% of par, and some of the weakest companies were trading as low as 5%, but are now trading at higher levels. This was not the case during much of 2008. It is interesting that managers were reporting, until very recently, that bid-ask spreads can reach 10% for less attractive credits in the secondary market. There is no primary issuance to speak of, although the recent improvement in spreads, should it continue, may allow for some later this year or next.

Many industry segments continue to drift downward with autos, gaming/leisure, housing, and retail sectors feeling the greatest impact. Cable television, health care, and utility companies have been among the best performers in the current environment. Middle-market credits can be more vulnerable given their tighter covenants compared to mega buyout deals. However, some managers see opportunity in the middle market due to less competition, generally lower levels of leverage compared to mega buyout transactions, and a less disbursed group of debt holders, which makes restructuring more streamlined.

Historical default rates in bank loans have ranged between 2% and 3% with a high of 8% in the last recessionary cycle (Table G). Currently, defaults are rising. At today's prices, the market is reflecting, in simplistic terms, close to a 25% default rate with no recoveries. Defaults by issuer are now 6.4%, according to the Moody's, up from 1.5% at this time a year ago. Recovery rates have typically been in the 70% to 75% range, depending on market sector. Most managers expect recovery rates to fall well below historical levels in this cycle due to weakening collateral values, limited and highly expensive DIP financing, and steadily climbing rates of default and bankruptcy. (See Table H.)

We believe that unlevered and experienced market participants can still secure attractive yields with senior positions in the capital structures of viable companies despite the recent market rally. We caution that prices could fall again as liquidity is constrained in some sectors and uncertainty persists in others. Also, rating agency downgrades of companies and CLO tranches could further pressure the market as some holders may be forced to sell. We consider this to be a period when navigating the loan markets requires exceptional credit analysis skills. We expect that to have a greater impact than ever in determining fund level performance. This is driven by the divergent behavior of loan prices for stronger and weaker credits, which is likely to continue during the remainder of 2009.

## **High-Yield Bonds**

At the end of last October, we noted that high-yield bonds were attractive tactically as an equity substitute, despite the dismal default outlook.<sup>2</sup> With a roughly 19% yield at the time, we argued that even if defaults over the coming years hit record highs and recovery rates on defaulted bonds hit record lows, investors would likely do okay in high-yield bonds, and that equities were unlikely to do well in that environment. We advised in October that investors with a tactical bent should decide how much they would

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<sup>2</sup> See our October 2008 Market Commentary *High-Yield Bonds: Toxic or Tasty?* Tactical allocations are not appropriate for some investors.

like to eventually invest in high-yield bonds, commit a substantial amount of that amount right away, and commit the rest in stages as spreads widened further. Those stages happened very quickly, of course. In a month and a half, spreads on the Barclays Capital index zoomed from 1,460 bps to an incredible 2,000 bps before bouncing back near year-end (Table I). They have continued to contract so far during 2009. Yield spreads as of May 29 were roughly 1,000 bps, and the yield on the Barclays Capital index is 13.8%, down from a peak level of 22.8%.

Since the end of October, high-yield bonds have returned a cumulative 23.4%, compared to -3.4% for U.S. equities. The lowest-quality bonds have seen the greatest bump since mid-March, with the Merrill Lynch index of bonds rated CCC and lower returning 52.2% and higher-quality bonds rated BB returning 19.4%. The Merrill Lynch index of distressed bonds delivered its best return in the 11-year history of the index in April (16.8%), and followed it up in May with the second-best monthly return (14.4%). That said, yields of all speculative-grade rating categories remain elevated (Table J).

The market's dynamic so far in 2009 has been interesting, with defaults worsening even as spreads tighten and issuance picks back up.

Defaults have been coming in fast and furious, and during the month of March they hit an annualized pace of 19%, one of the worst individual months during the past two decades. Defaults were similarly ominous during the month of April. Through the end of April, the trailing 12-month default rate is 9.2%. Many investment banks and rating agencies anticipate defaults will reach 13% to 16% this year and will decline next year. Bonds rated CCC or below currently make up 24% of the market value of the Merrill Lynch High Yield Master II Index, compared with 17% a year ago and 14% in July 2001, six months prior to the market's last default peak (Table K). The increase from 17% to 24% over the last year is due to rating agency downgrades. A high percentage of bonds rated CCC and lower default within a year.

Recovery rates are coming in quite low (below 20%), and Goldman Sachs believes 2009 recovery rates will average just 12.5% (well below trough levels from prior default cycles).

Issuance has rebounded and for the first four months of 2009 was higher than the same period last year. Total high-yield issuance over the last four months of 2008 was just \$3.8 billion, but in the first four months of 2009 more than \$19 billion was issued, and May saw nearly \$22 billion in issuance, the largest single-month total since June 2007. The quickened pace of issuance reflects high-yield managers putting new money to work. From when equities bottomed in March through early May, U.S. investors added about \$4.5 billion to high-yield mutual funds, compared to a \$2.4 billion outflow for all of 2008.

Investors that have already built a tactical allocation to high yield may be asking whether the easy money has been made and bond prices are getting ahead of themselves. On the other hand, investors that have not yet built an allocation, but are considering one, may be asking whether they are too late to the party. Actually, for each of those two groups the relevant question is essentially the same, even though the frame of reference is much different. Whether investors own high-yield bonds today or not, the question is whether at today's prices they should. Investors cannot buy yesterday's returns, so they need to instead estimate what

tomorrow's returns will be and calibrate whether they believe those returns to be attractive relative to their funding source (typically equities).

Even after coming in several hundred basis points, today's yields and option-adjusted spreads are still near the peak level seen during the last high-yield cycle. Bonds in the Merrill Lynch High Yield Master II Index are priced at 76 cents per dollar of par value on average, compared with 63 cents last October and a low of 55 cents in mid-November. Prices during the last cycle never bottomed at around 75 cents on the dollar. The bottom line is that yields are still quite high and prices are still low, relative to history.

The potential for reasonably attractive total returns from this point forward still remains, even if defaults and recoveries are moderately more severe than the early 1990s and early 2000s downcycles, as we anticipate they will be. If defaults dramatically overshoot their level from prior cycles or even versus the Great Depression, then returns are likely to be flat or negative. However, equities, the funding source for this tactical allocation, are also unlikely to do well in that kind of environment.

Below, we model in a simple way how high-yield bonds might fare in various environments. First we compile a default-loss scenario based on the average of three high-yield downcycles, and then we tweak that scenario to show how returns might differ if the default-loss environment is extremely poor relative to prior cycles. Similarly, we look at how stable and falling yields would impact price returns.

For the first default scenario, we assume that defaults peak six months from now, and that they follow the average default path of three nasty high-yield busts: the 1930s, the 1990s, and the first years of this decade (Table L). We assume in this scenario that recoveries on defaulted bonds are just 15% for each of the next two years, worse than the trough levels of prior cycles (see Table M), reflecting the high leverage at the time of issuance during this cycle. Putting it all together, for this first scenario averaging prior high-yield routs, we assume defaults peak at about 14% six months from now, and they decline fairly rapidly from there.

Next we construct an extreme default-loss scenario where defaults are consistently 150% of the Great Depression level, and recoveries are just 10 cents on the dollar.

We then construct two yield scenarios. The first scenario assumes yields contract at their average pace during the early 1990s and early 2000s cycles. During those environments, yields declined by an average of about three-eighths from six months before defaults peaked to 18 months after peak defaults.<sup>3</sup> The second scenario assumes that yields do not come in at all from their current elevated levels, even once defaults peak and begin to moderate.

Table N shows a simple estimate of gross returns during the four combinations of the two default scenarios and the two yield scenarios. The estimated gross returns range from an annualized 14.8% in the combination of typical default-peak scenarios to 0.8% in the combination of extreme scenarios.

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<sup>3</sup> We assume that the 37.2% yield decrease (from 13.7% at the end of May to 8.6% in two years) happens smoothly.

A gross 0.8% return would become a modest loss after transaction costs and manager fees. That is a poor return for putting capital at risk, of course, but remember that this scenario is worse than the experience during the Great Depression, and that even high-quality equities are likely to perform much worse in this kind of scenario.

It is important to keep in mind that this kind of analysis is filled with plenty of simplifying assumptions and is far from precise. For example, our scenarios assume that defaults peak six months from now; if defaults instead peak two years from now, or if they peak and remain at a high plateau (rather than recede as they have historically), that may materially impact results. It also does not take investor behavior into account, and it is possible that yields will push far wider as defaults worsen and some investors get gunshy, though yields will likely stabilize and then contract by the time defaults have clearly peaked. We do believe recoveries will be lower than prior troughs, and recent months have certainly borne that out. Defaults are accelerating, and could top the 1930s level; however, they should begin to contract over time, as the spoiled fruit falls off the tree leaving the healthier fruit behind. As investors realize that the worst has passed, yields should contract.

Bottom line is that yields were so high last fall that even *after* this really solid bounce, high-yield bonds remain reasonably attractive despite the dismal default and recovery prospects. That said, bond prices may have improved somewhat faster than fundamentals, particularly for the lowest-quality credits, and there is a real possibility that prices will retrace prior levels at some point.

## **Mortgage Securities**

Mortgage securities remain undervalued today, but our outlook continues to be cautious. Many factors drive the \$11 trillion U.S. mortgage market. As we have come to appreciate via the headlines over the past 18 months, it is a highly complex market influenced by unemployment, interest rates, government policy, unique regional factors, the structure of credit markets, and the policies and procedures of bank and nonbank actors across the home mortgage landscape. Historically, mortgages have been among the most liquid and highly regulated parts of the financial sector. Those factors made the mortgage market attractive to investors all over the world. Those factors also led to its demise as global investors with excess liquidity, and in search of higher yields, farmed out their analysis of risk/return to credit rating agencies that failed to maintain quality standards in the face of conflict-ridden business practices and poorly constructed econometric models. The securitization market imploded as highly leveraged banks and financial institutions bet on a never-ending stream of “performing” mortgage-backed securities to obtain attractive fees and incremental yield. We all know the story well by now, and we still struggle with its aftermath.

To understand where we are today, and where we may be headed, it is critical to review three key areas: borrower performance; home price trends; and interest rates/government policy, which is really a proxy for housing affordability.

## **Borrower Performance**

Americans are falling behind on their mortgages at unprecedented levels due to the trends of slowly rising wages, high levels of debt to income, unsuitable products such as no-money-down mortgages, and, of course, unsettled labor markets. Americans have borrowed heavily against their homes compared to previous generations. In aggregate, they have home equity of \$8.5 trillion compared to almost \$11 trillion of mortgage debt, an equity ratio of approximately 80% compared to over 500% at the end of World War II.

Today, according to Freddie Mac, there are roughly 55 million mortgages in the United States (which represent almost 70% of all homeowners). Approximately 3.5 million, or about 6.5%, are considered seriously delinquent. Over half of all these delinquencies come from private label securitized mortgages, also known as non-agency mortgages. At the close of 2008, over 7.5% of single to four family homes were either severely delinquent or in foreclosure, compared to only 2% to 3% for the previous 20 years.

The delinquency picture is even more startling if we consider such famous categories as Alt A, option adjustable-rate mortgages, and subprime, where the delinquency rates are nearly 20%, 30%, and over 40%, respectively. These categories are a sizable part of the market, as combined outstanding balances for Alt A and subprime exceed \$3 trillion. The slope of the default curve for prime borrowers has steepened as well, although not as severely as for the higher risk categories. Prime delinquencies have reached approximately 5%, far exceeding any recent historical precedent (prime foreclosures are 2.5% as of the end of first quarter 2009 [Table O]). This group, of course, is more highly vulnerable to labor market turbulence than to poorly structured products, loan fraud, or bad payment habits.

## **Home Price Trends**

Home prices continue to drop nationwide as the country's stock of housing supply remains high compared to historical trends. (See Tables P and Q.) We have been bouncing between a nine- and 11-month supply since last year, which is more than double historical levels. Existing home sales have plunged since late 2007 and have ranged between 4.5 million and 5.0 million units in the past year. A recent uptick, reported with great energy by the media, is somewhat misleading as foreclosure sales have driven regional buying. In California, for example, nearly 60% of sales have been related to foreclosures in recent months. This was due to low rates, a large supply, and government tax credits up to \$8,000 for first-time home buyers. Foreclosure-related sales are approximately 45% on a national basis, and RealtyTrac, an industry data provider, estimates that about one-third of all properties on the market for sale are bank-owned properties. In fact, that firm also reported that, last month, nearly 1 in every 398 households received some form of foreclosure notice—an alarming figure representing an 18% jump from a year ago. The damage could have been worse were it not for foreclosure moratoriums imposed by a number of state regulators and legislative bodies.

The headwinds the mortgage market faces are unmistakable. The market is confounded by the vicious cycle caused by lower home prices, which are 30% to 40% off peak values in some areas, and down 14% from a year ago nationwide, according to the National Association of Realtors. The stress is growing on

overleveraged borrowers who now find themselves underwater on their mortgages. A number of mortgage industry sources have estimated that nearly 25% of all homeowners are underwater, and more than 30% of those who bought homes in the last five years owe more than the value of their home. At the end of 2006, that number stood at only 4%.

Why does this matter? It matters because there is a high correlation between default rates on mortgages and the percentage by which borrowers are underwater on their mortgages. This is particularly true of high-risk categories such as subprime, where the delinquency rate and the percentage of those underwater nearly mirror one another. Because our legal system provides recourse only to the property, consumers are left with a tough moral, but easier legal and financial, choice to keep paying or walk away from their homes. Defaulting and renting are both commonly chosen, thus putting further pressure on home prices as consumers balk at putting more money into a depreciating asset—at least for the time being.

### **Housing Affordability**

The U.S. government has had a mixed record so far in addressing the housing crisis. It has been active and visible, yet largely ineffective. The conservatorship of Fannie Mae and Freddie Mac, the complexity of the mortgage securitization markets, the convoluted and restrictive Hope for Homeowners program, and stubbornly high interest rates for much of last year all conspired to keep consumers on the sidelines. The government continues to work with national and local lenders to encourage borrowing and to modify existing problem loans. The recent spate of federal programs, such as Housing Affordability and Stability Program, are designed to support responsible borrowing, reasonable loan alterations, and the troubled cash flows of highly leveraged consumers. The Obama Administration's Home Affordability Modification Program now requires that second liens be modified in conjunction with first mortgages, which had been an obstacle for delinquent homeowners up to this point. This is a positive for RMBS that are backed by first mortgages. The Term Asset-Backed Loan Facility (TALF), funded by the Fed, is not geared toward residential mortgage securities, but that could change as cheap government leverage may be required to entice private lenders to increase lending to parts of the market. (See Appendix A for a discussion of TALF.)

Mortgage rates have now settled in the 5% range for 30-year mortgages. This cheaper rate environment, along with the declining prices referenced earlier, has spurred a refinancing wave for those with stable credit histories and equity in their homes. In fact, the National Association of Realtors reports that its Housing Affordability Index has risen to the most favorable level in the past 20 years (Table R). And the home price-to-gross rent ratio has been approaching levels seen throughout much of the 1990s, suggesting the choice to purchase a home should be more sensible for many, at least on a pure mathematical level.

### **Where Does This Leave Us?**

We remain cautious in the short term on the mortgage market because of continued weakness in home prices, the moribund labor market, the large supply of foreclosed and unsold homes, and nascent

government policies. We sense that policymakers are on the right track, but their programs need time to germinate; this is a huge market that cannot be turned in a matter of months, as we have seen. However, the overall weak economy and the reinforcing cycle from delinquencies and negative home equity will also act as a headwind to dramatic near-term recovery. Investment managers, therefore, will have to be aggressive in their worst case scenarios as they price RMBS purchases. They will build in very high default rates as well as extreme assumptions about falling home prices and losses. This kind of modeling could lead to attractive returns if they are buying AAA securities, and if they avoid using conventional recourse leverage requiring initial margining and marked-to-market positions, which would be damaging should prices of securities retreat again.

All markets are significantly discounted by historical standards and disparities across securities are wide. The decline in home prices will remain uneven around the country, as will default and foreclosure rates. However, most collateralized debt obligations and other RMBS have concentrations of loans in heavily hit areas such as Arizona, California, Florida, and Nevada where mortgage lending growth was most pronounced in the past five years. Although many managers see long-term value in the securities tied to performing prime borrowers and very seasoned subprime pools, we emphasize the need for a high degree of specialized skill to navigate this market, which also incorporates meaningful political risk and sensitivity to the economic recovery.

## **Conclusion**

Opportunities in distressed markets have been among the best, and certainly the broadest, created by the financial and economic crisis. Even taking the recent rally into account, various distressed investments continue to look relatively attractive, particularly on a risk-adjusted basis, when compared to equities—the most common source of funding for distressed debt investments. First and foremost, we would emphasize that the characteristics of distressed markets today are quite different than in past cycles and the potential for investing in cheap assets that ultimately go to zero is high. Manager selection across the board is always important, but today it is particularly critical. Further, we would also note that while credit spreads have narrowed significantly, it is likely they will widen again. Investors in these strategies should be prepared for some volatility.

The best opportunities today are in the leveraged finance segment of the market, which includes high-yield bonds and bank debt. While the rally saw spreads tighten across all sorts of distressed debt investments, pricing in these markets had incorporated draconian assumptions about defaults and recovery rates that in some cases were worse than were seen in the Great Depression. High-yield bonds and bank loans continue to sell at prices that discount pretty severe defaults with low recoveries.

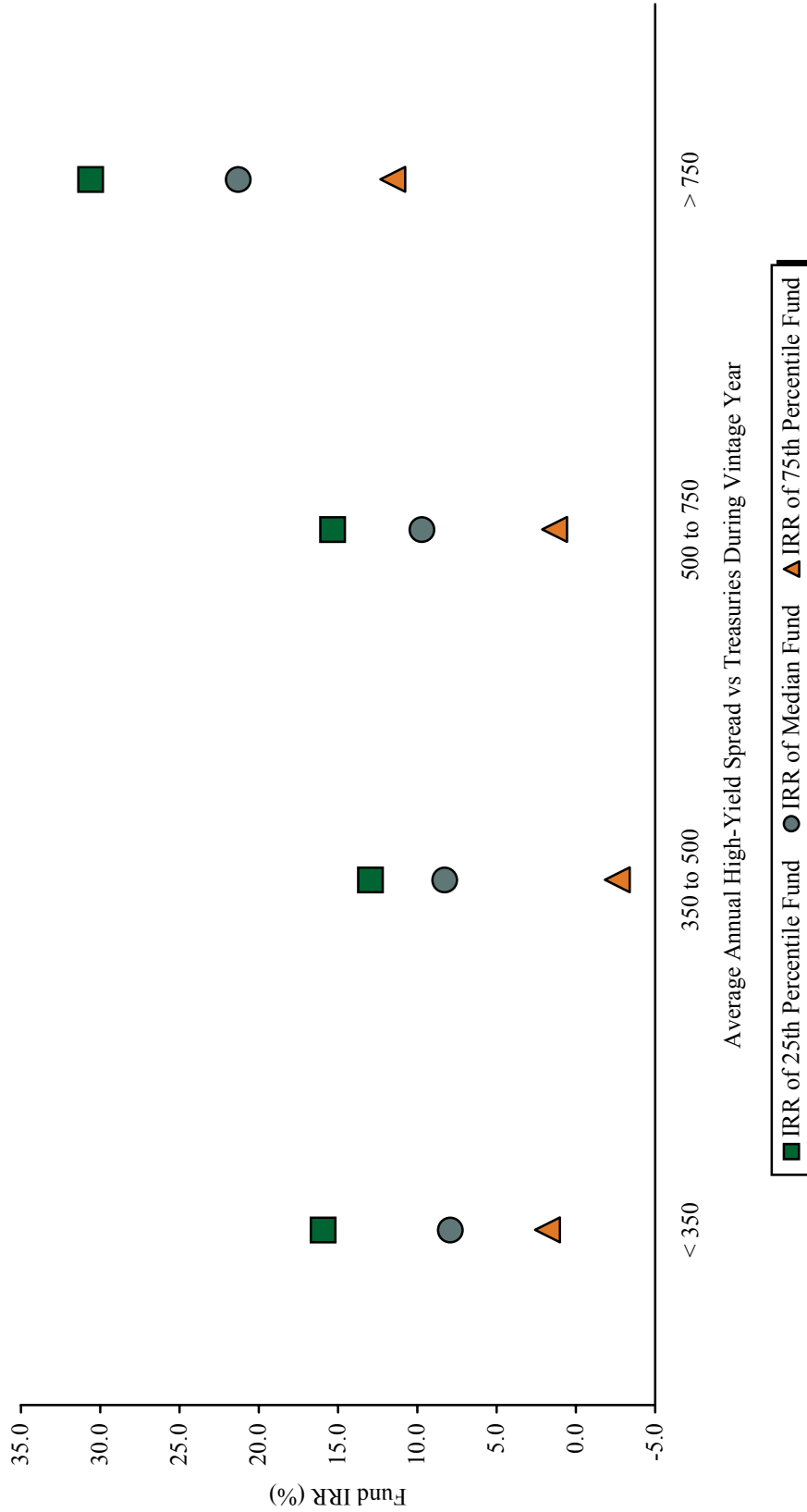
Control/turnaround investments offer attractive opportunities that should be realized by appropriately skilled managers. The sheer volume of the opportunity and tempered expectations for exit multiples, along with limited access to DIP financing, suggest a differentiated skill set is required for success in the current environment. Managers in this area will need strong credit analysis skills as well as operational skills in order

to generate strong returns. While there are likely some opportunities available in this arena today, this segment of the market should be more attractive over the next several years, as bankruptcies continue to escalate and the massive amount of five- to seven-year debt issued earlier this decade begins to mature.

Finally, while the mortgage market is cheap by historical standards, and pricing differentials provide ample opportunity for managers to add value through security selection, the housing market remains weak and fundamentals continue to deteriorate. Managers will purchase mortgage-backed securities at prices that discount worst-case scenarios, mitigating some risk, but an exceptional degree of specialized skill is needed for success in this complicated market. Further, the political risk is difficult to mitigate given the importance of this sector to the U.S. economic recovery. As we have warned for some time, buyer beware.



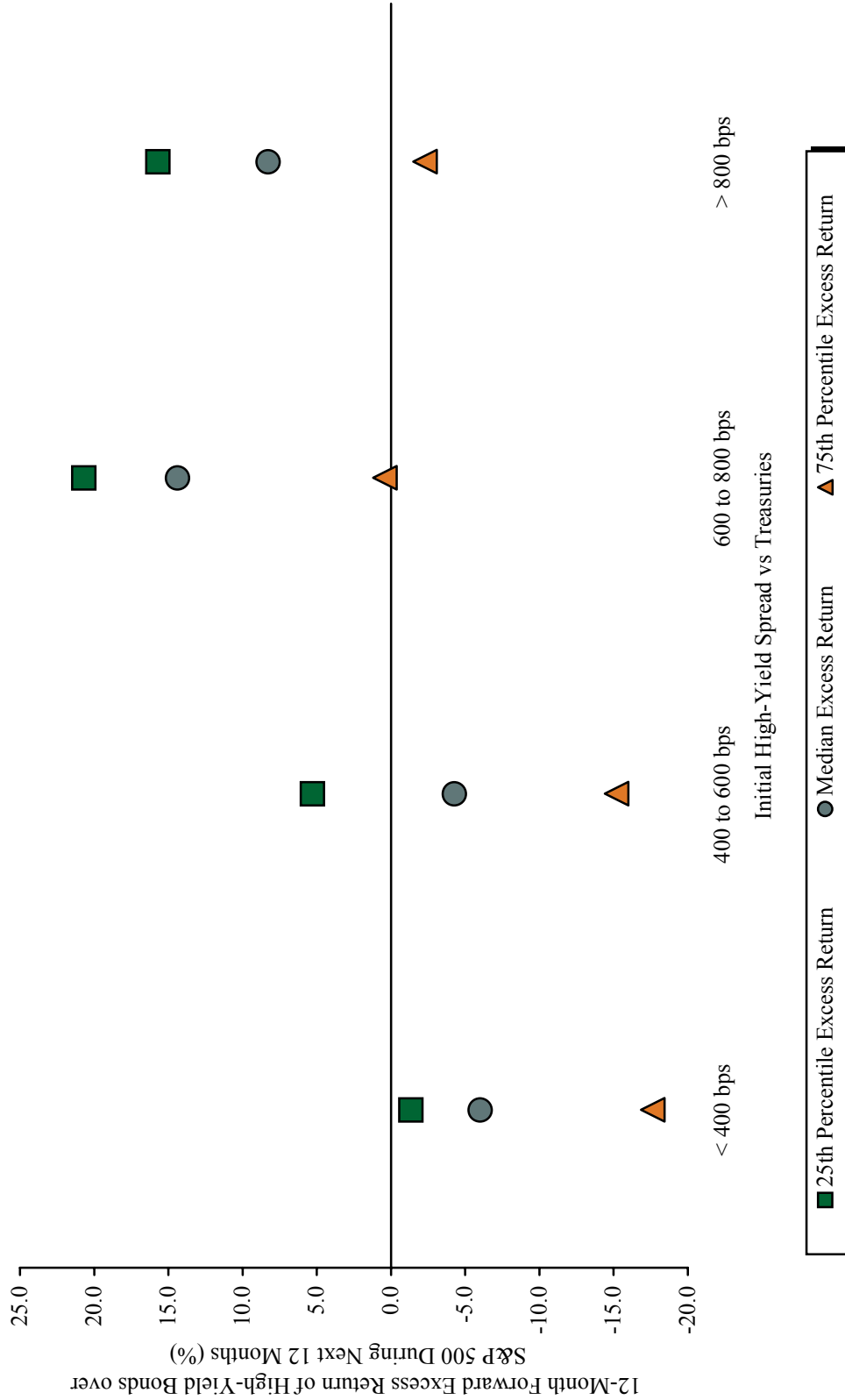
**Table A**  
**IRR OF DISTRESSED SECURITIES FUNDS COMPARED TO AVERAGE YIELD SPREAD OF HIGH-YIELD BONDS DURING YEAR OF VINTAGE**



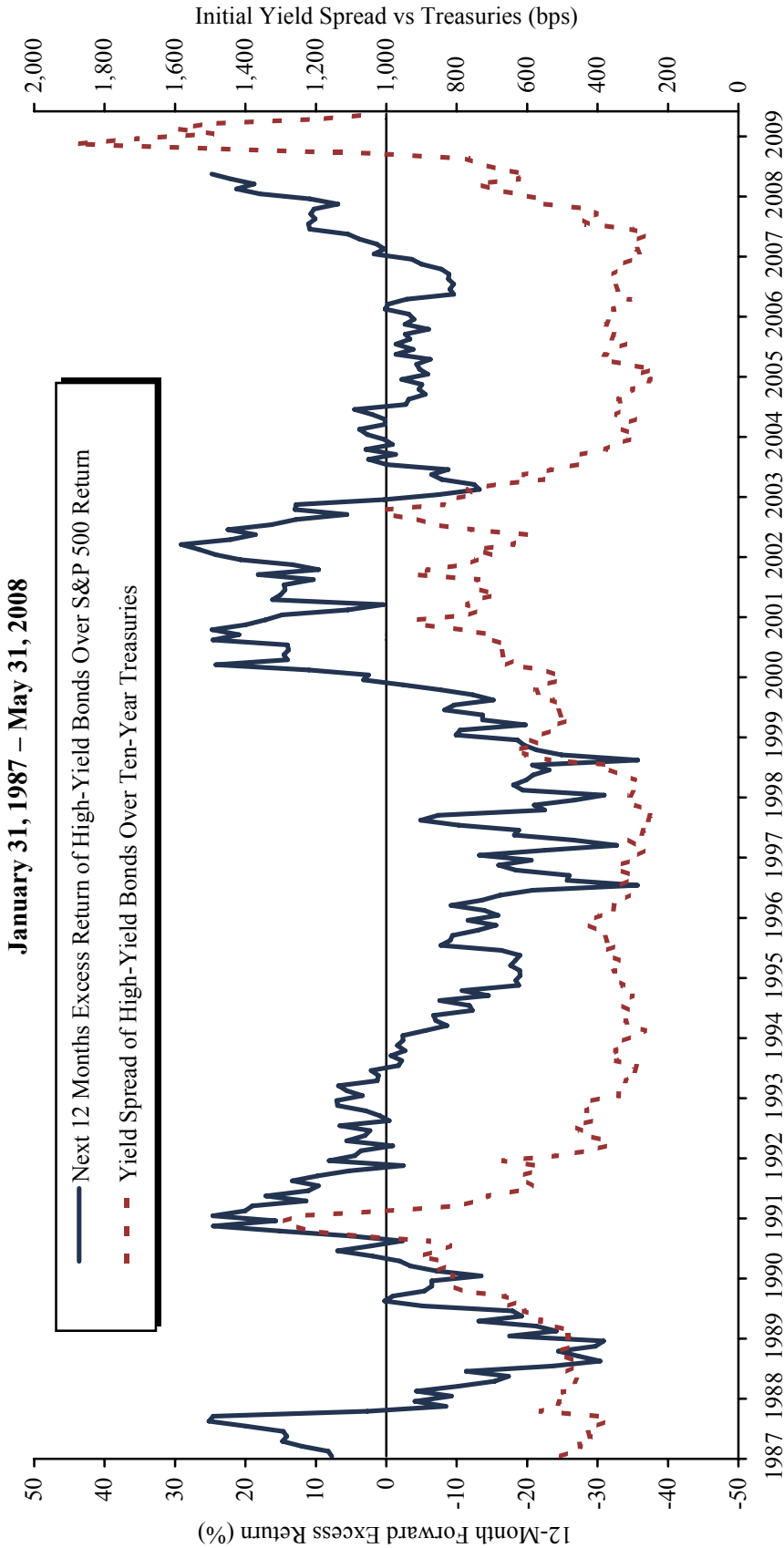
Source: Cambridge Associates LLC Non-Marketable Alternative Assets Database.

Notes: Vintage years represent funds inception from 1988 through 2005. Percentile ranks are calculated on the basis of 0 being the best and 100 being the worst.

**Table B**  
**12-MONTH FORWARD EXCESS RETURNS OF HIGH-YIELD BONDS OVER U.S. EQUITIES**  
**January 1, 1987 – May 31, 2008**



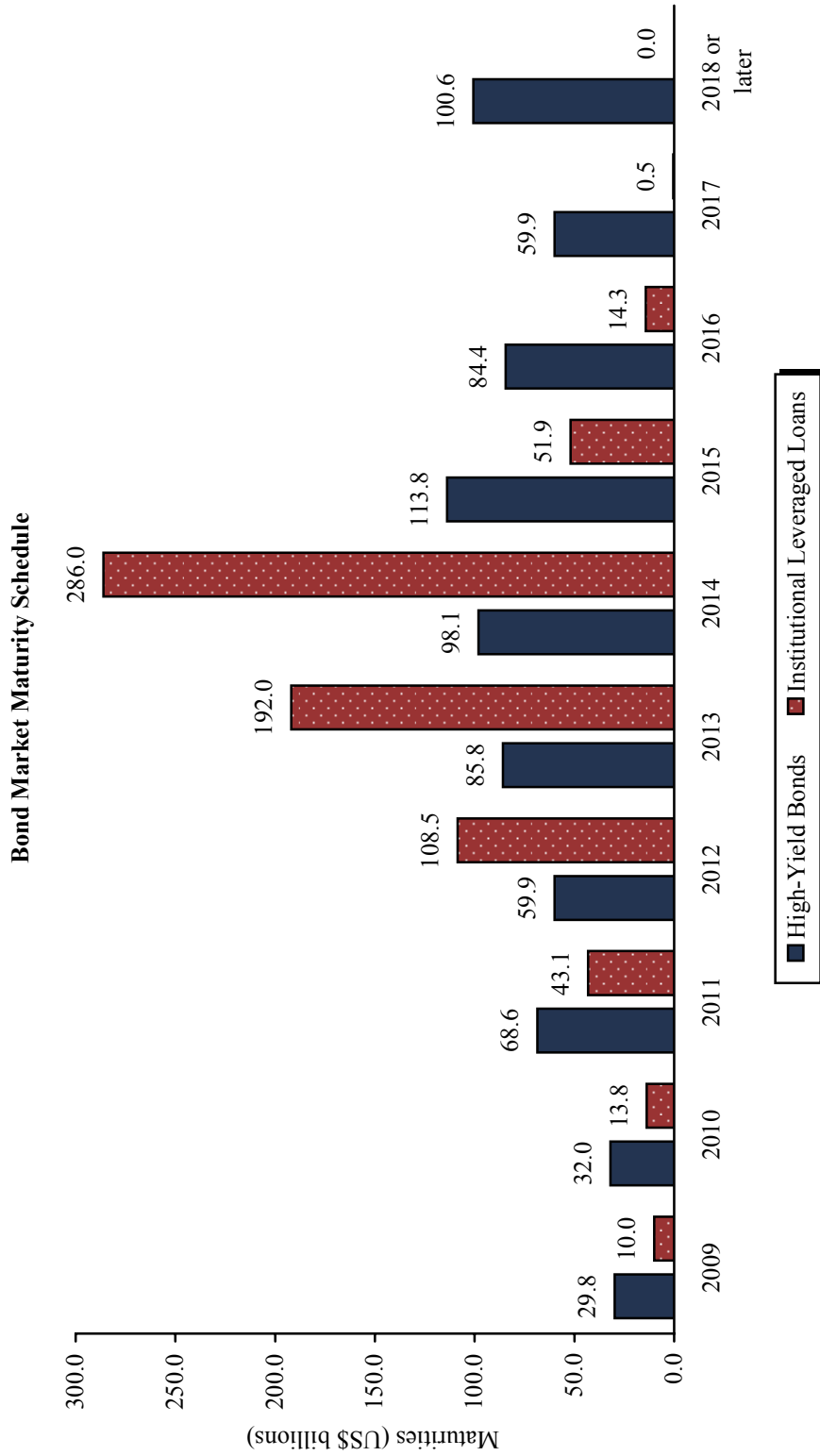
**Table B (continued)**  
**12-MONTH FORWARD EXCESS RETURNS OF HIGH-YIELD BONDS OVER U.S. EQUITIES**  
**January 31, 1987 – May 31, 2008**



Sources: Barclays Capital, Cambridge Associates LLC Non-Marketable Alternative Assets Database, and Thomson Datastream.

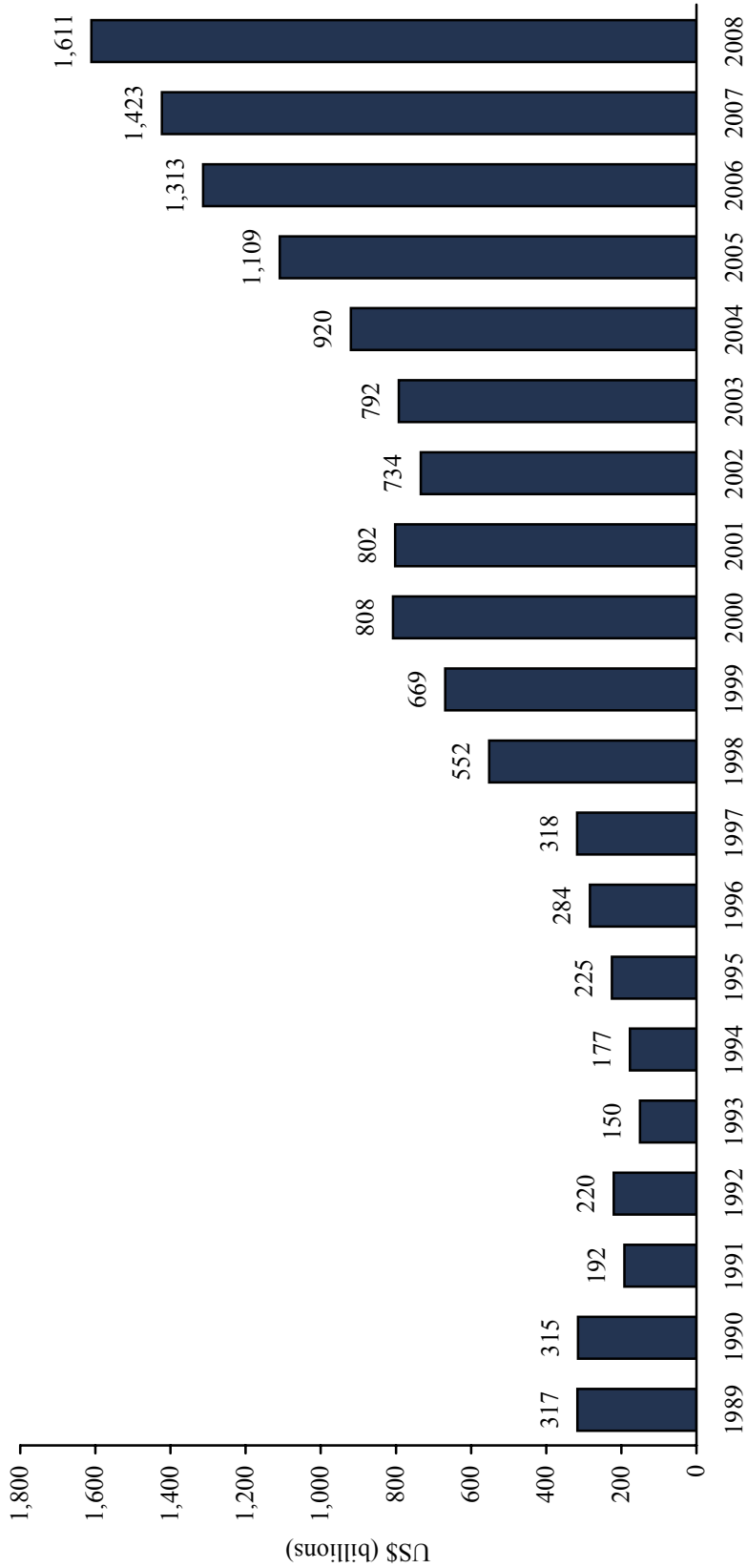
Notes: Forward excess return indicates the difference between the subsequent 12-month total returns of the Barclays Capital High Yield Composite Bond Index and the S&P 500 Index. Yield spread refers to the current difference between the yield-to-worst of the Barclays Capital High Yield Composite Bond Index and the yield-to-maturity of the ten-year Treasury note. Percentile ranks are calculated on the basis of 0 being the best and 100 being the worst.

**Table C**  
**LEVERAGED FINANCE MATURITY SCHEDULE**  
**2009–18 or Later**



Source: J.P. Morgan Securities, Inc.  
 Note: Graph represents annual maturities.

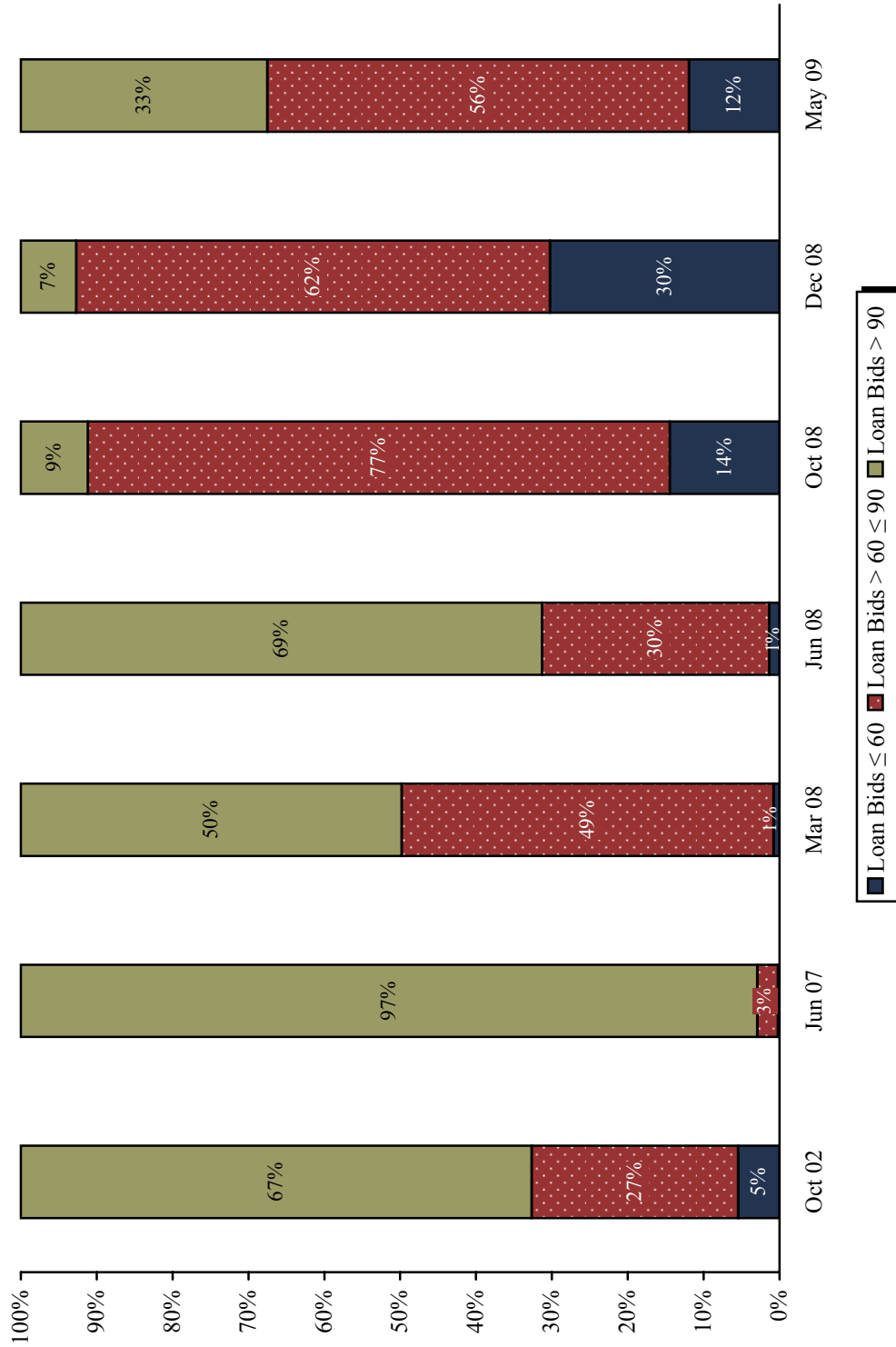
**Table D**  
**U.S. LEVERAGED LOAN MARKET SIZE**  
**1989–2008**



Source: Credit Suisse.

Note: Bank loans include bank-held Term Loan A Market & Institutional Term Loan B Market.

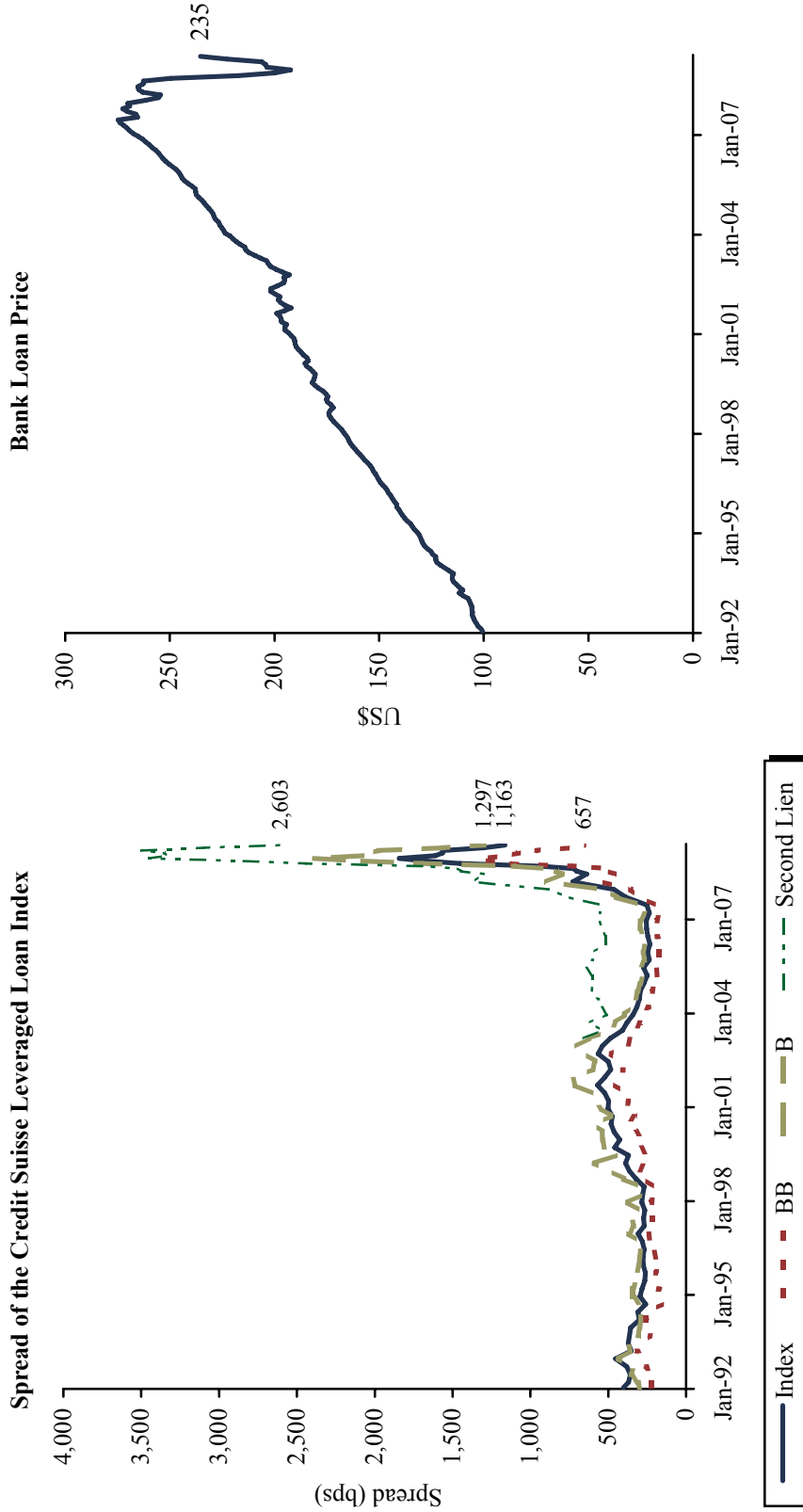
**Table E**  
**DISTRIBUTION OF LOAN PRICES**



Source: Credit Suisse.

Note: Index used is Credit Suisse Leveraged Loan Index.

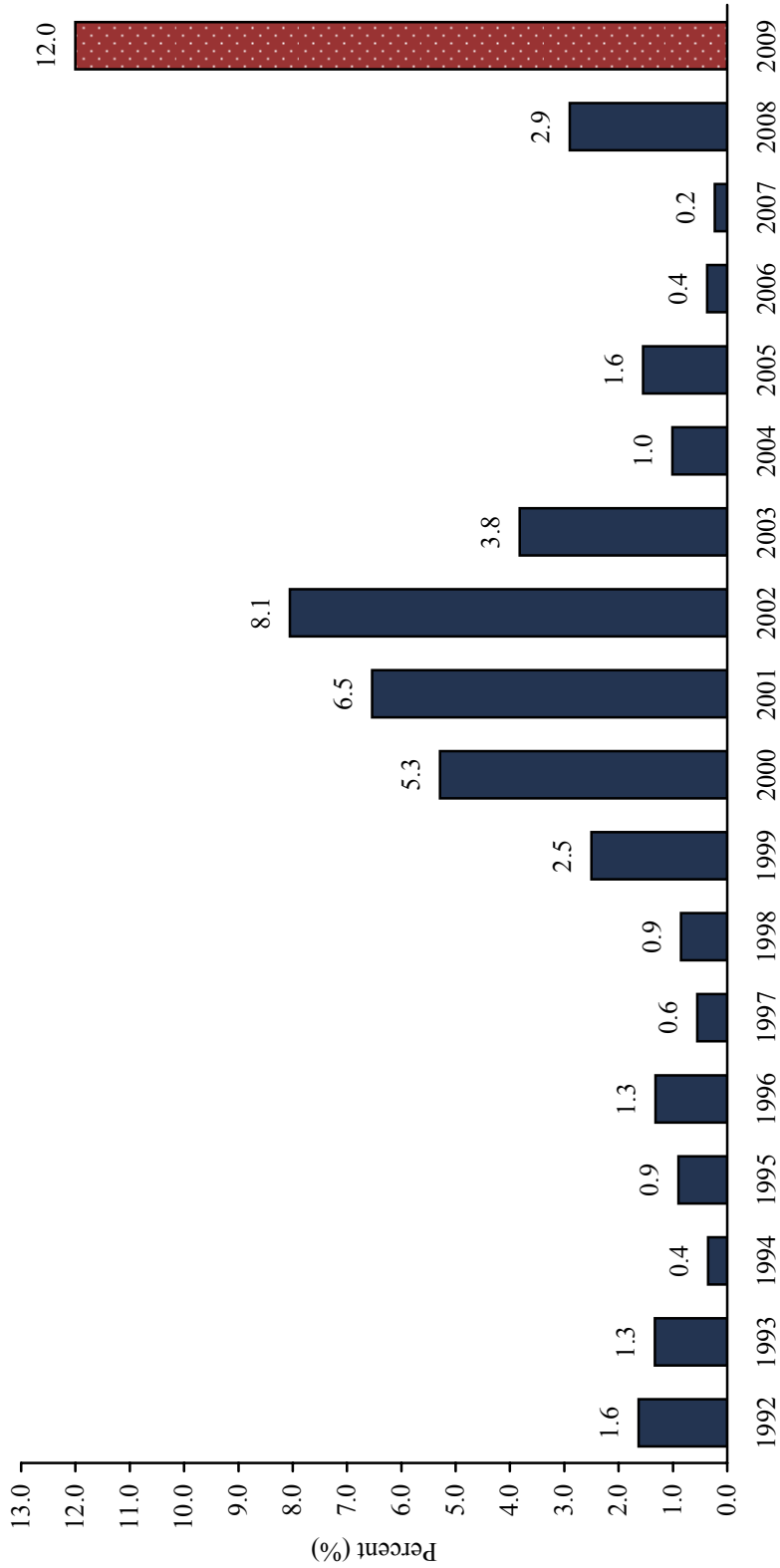
**Table F**  
**BANK LOAN SPREAD AND PRICES**  
**January 1, 1992 – May 31, 2009**



Source: Credit Suisse.

Note: Discount margin assumes a three-year life.

**Table G**  
**U.S. LEVERAGED LOAN DEFAULT RATES**  
**1992–2009**

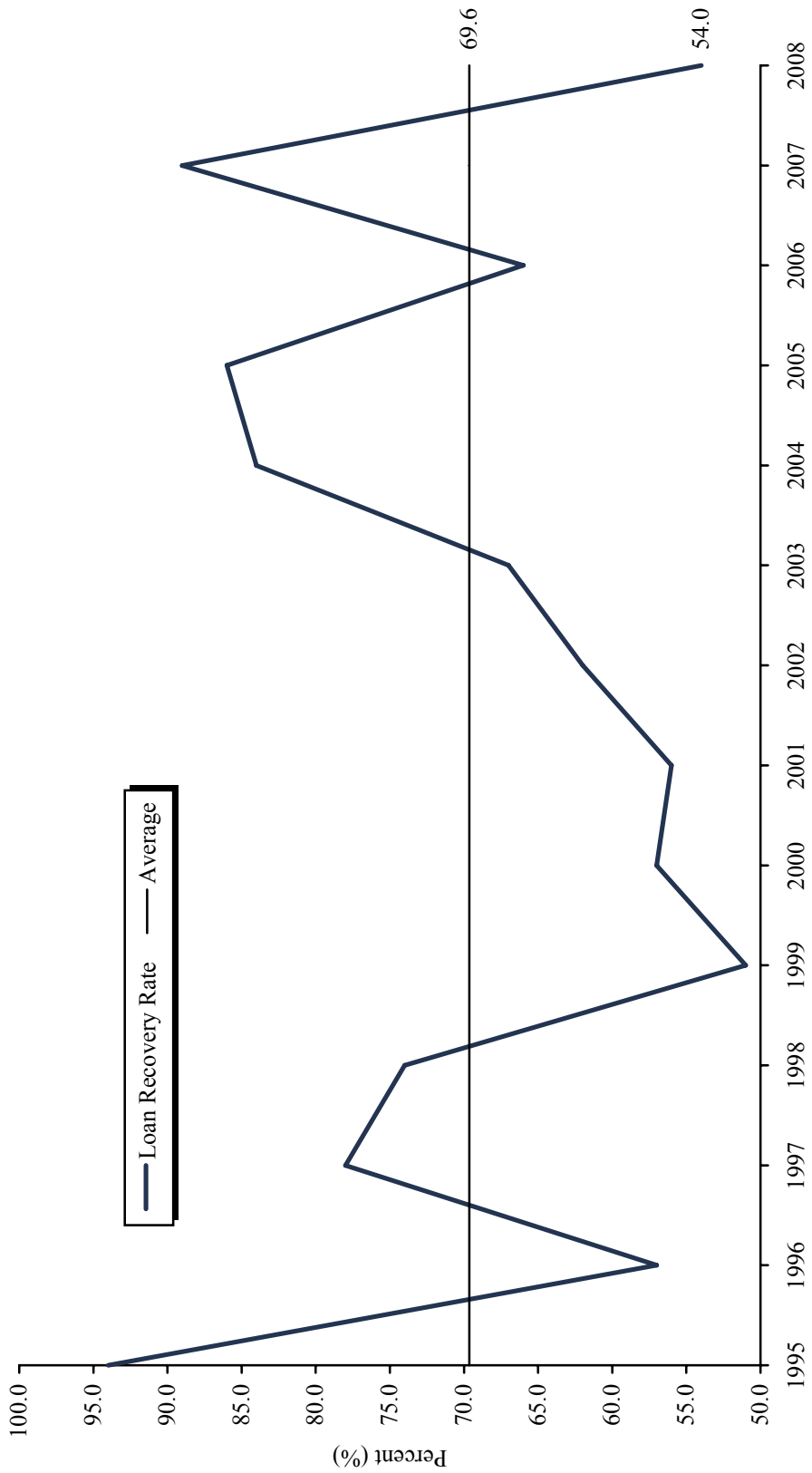


Source: Credit Suisse.

Notes: Bank loans include bank-held Term Loan A Market & Institutional Term Loan B Market. Forecast for 2009 is an average of the 10% to 14% default rate predicted by Credit Suisse.

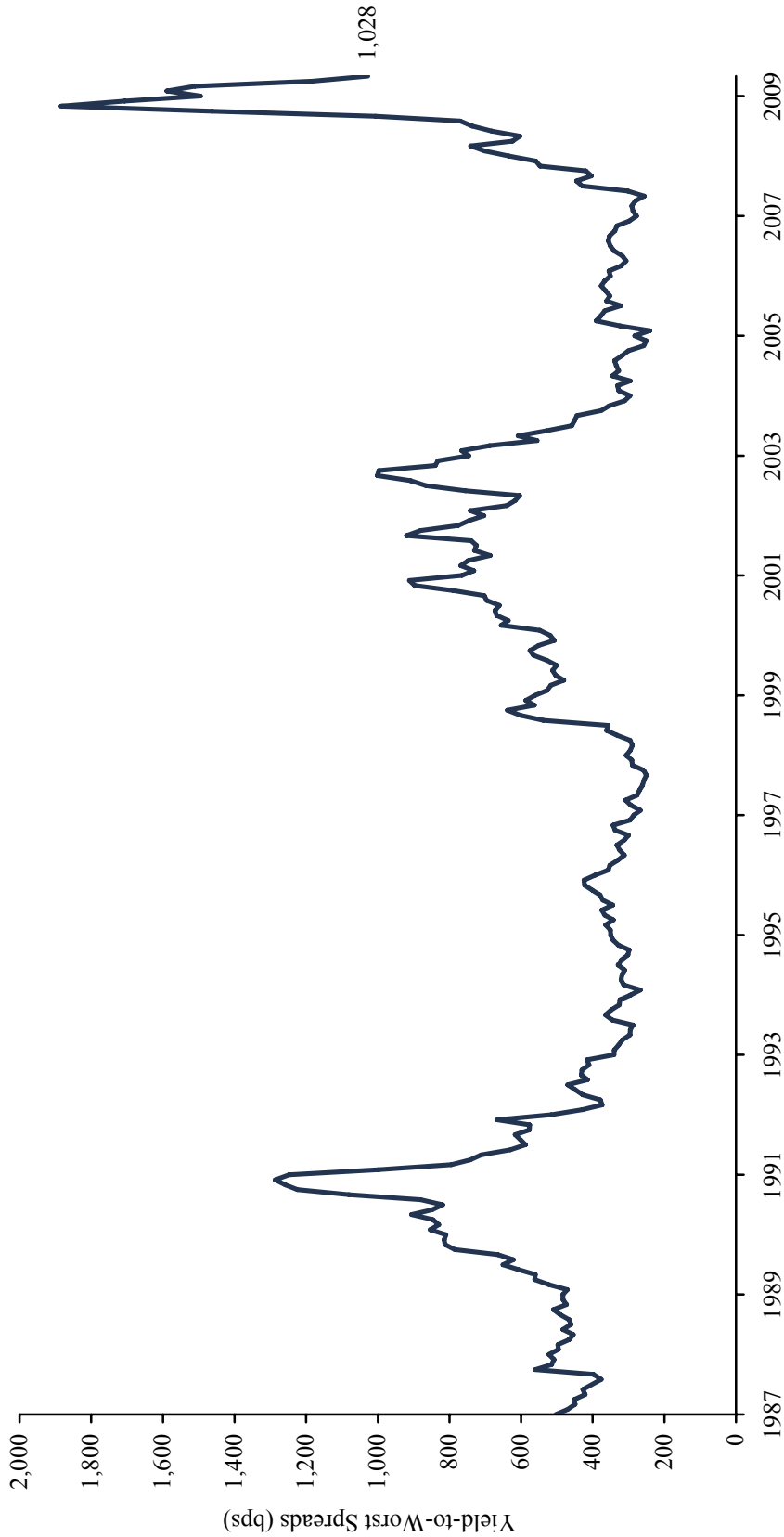


**Table H**  
**U.S. LEVERAGED LOAN RECOVERY RATES**  
**1995-2008**



Source: Credit Suisse.

**Table I**  
**YIELD SPREADS FOR HIGH-YIELD BONDS OVER TEN-YEAR TREASURIES**  
**January 31, 1987 – May 31, 2009**



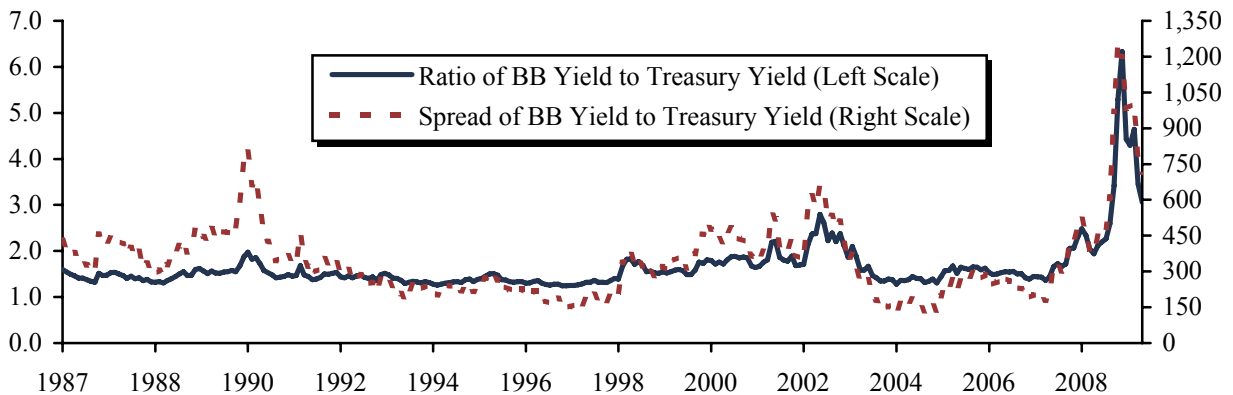
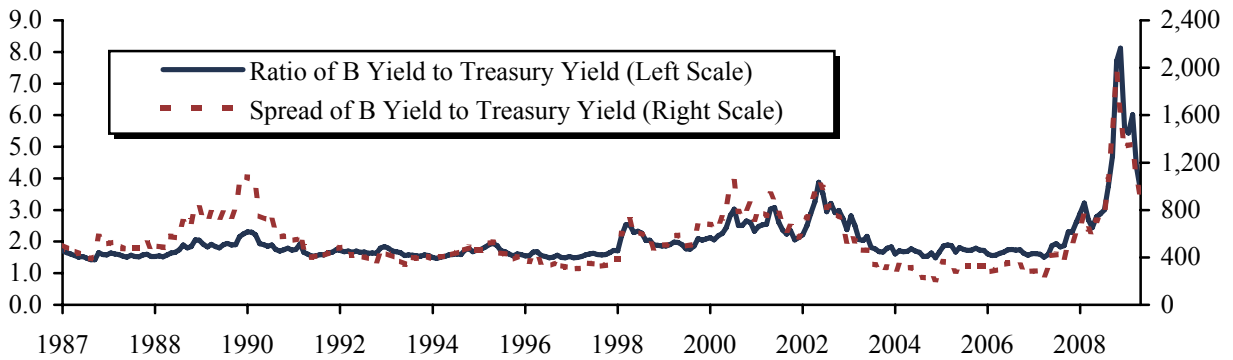
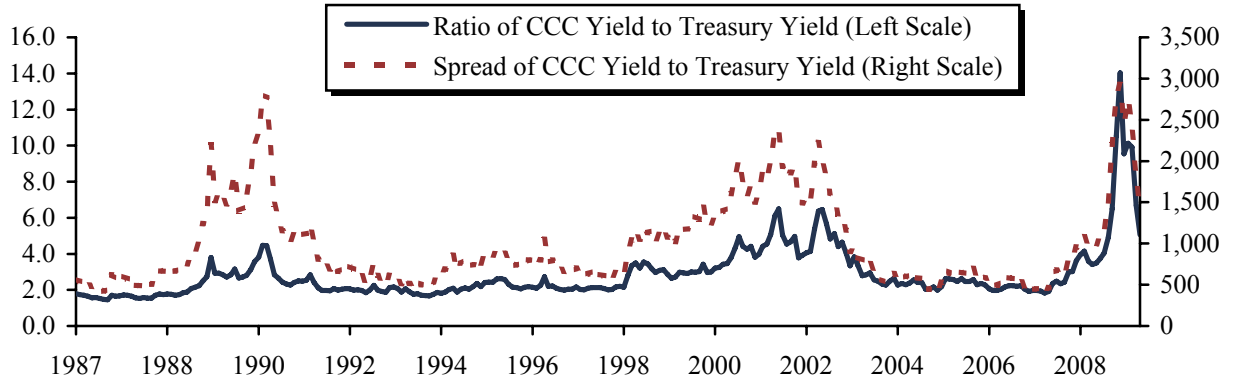
Sources: Barclays Capital and Thomson Datastream.

Note: Yield spreads are based on the difference between the weighted-average yield-to-worst (the lower of yield-to-maturity and yield-to-call) of the Barclays Capital High Yield Bond Composite Index and the yield-to-maturity for ten-year Treasury securities.

**Table J**

**RATIO AND SPREAD OF HIGH-YIELD BOND YIELDS TO YIELDS OF TEN-YEAR TREASURIES**

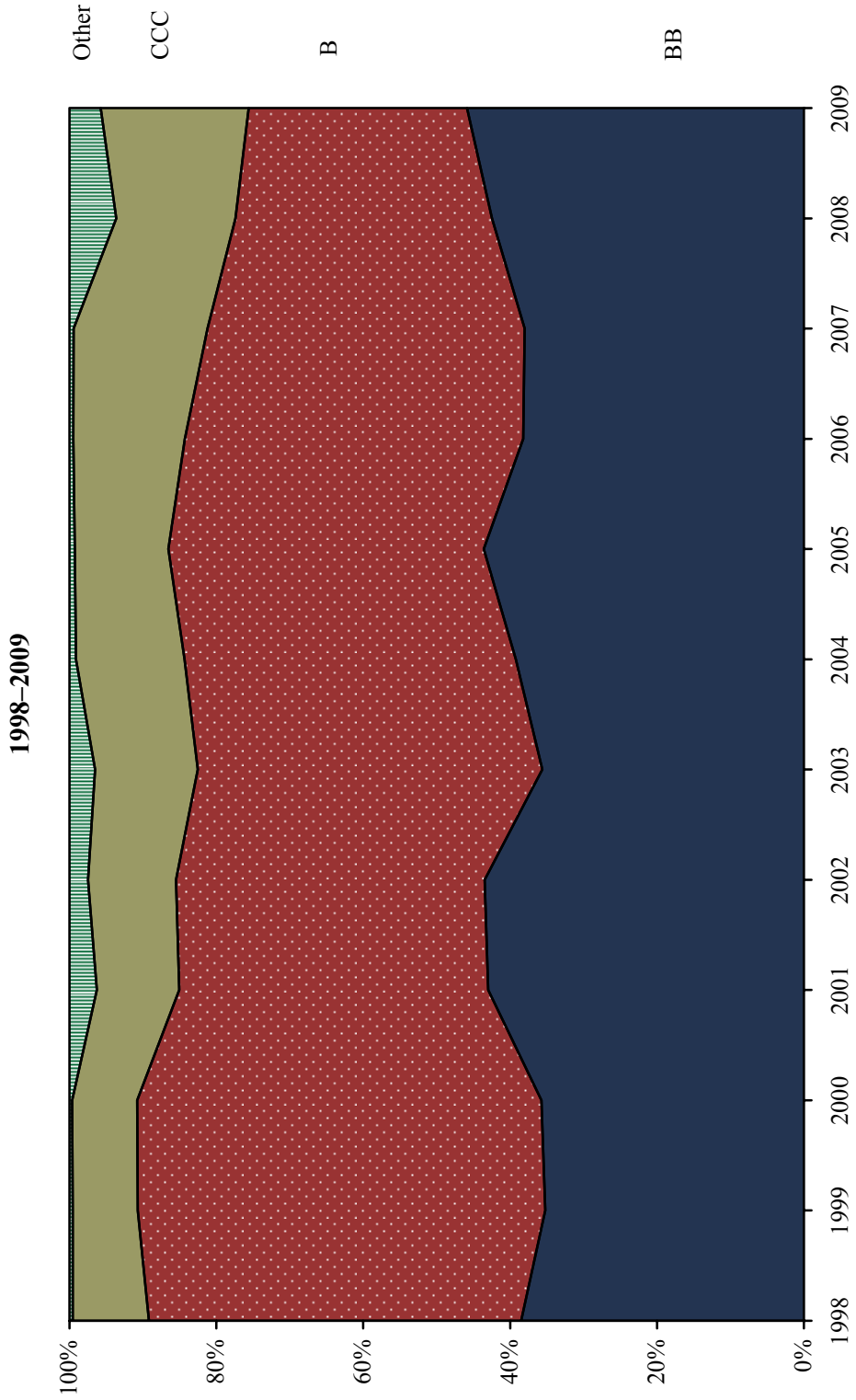
**January 31, 1987 – May 31, 2009**



Sources: Barclays Capital and Thomson Datastream.

Notes: Yield ratios are based on the ratio between the weighted-average yield-to-worst (the lower of yield-to-maturity and yield-to-call) for each high-yield rating category and the yield-to-maturity for ten-year Treasury securities. Credit ratings are shown in the equivalent S&P rating category.

**Table K**  
**RATINGS DISTRIBUTION OF THE MERRILL LYNCH HIGH YIELD MASTER II INDEX**  
**1998-2009**

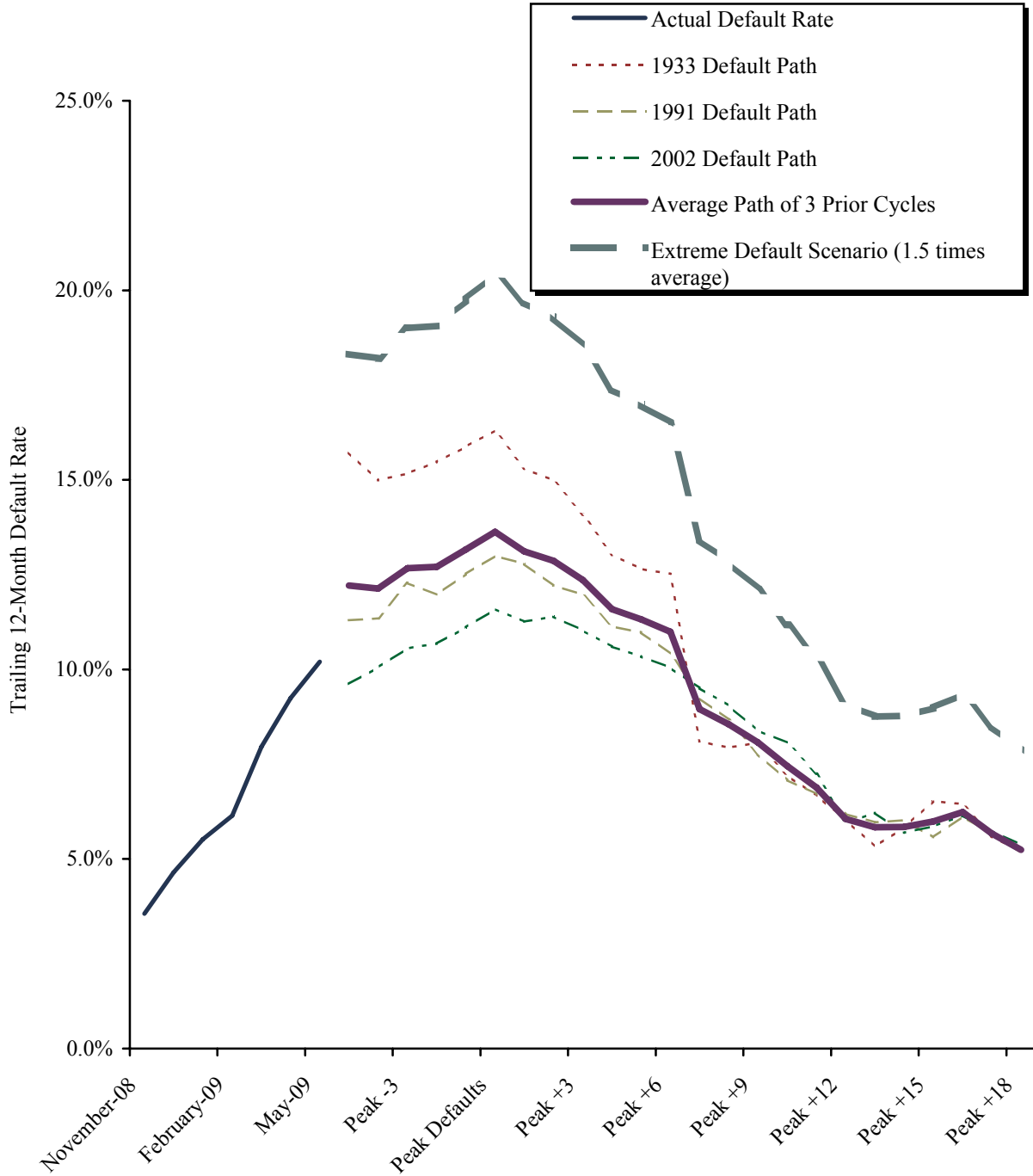


Source: Merrill Lynch & Co.

Notes: Ratings distribution is shown by market value rather than par value. Data for 2009 are as of May 31.

Table L

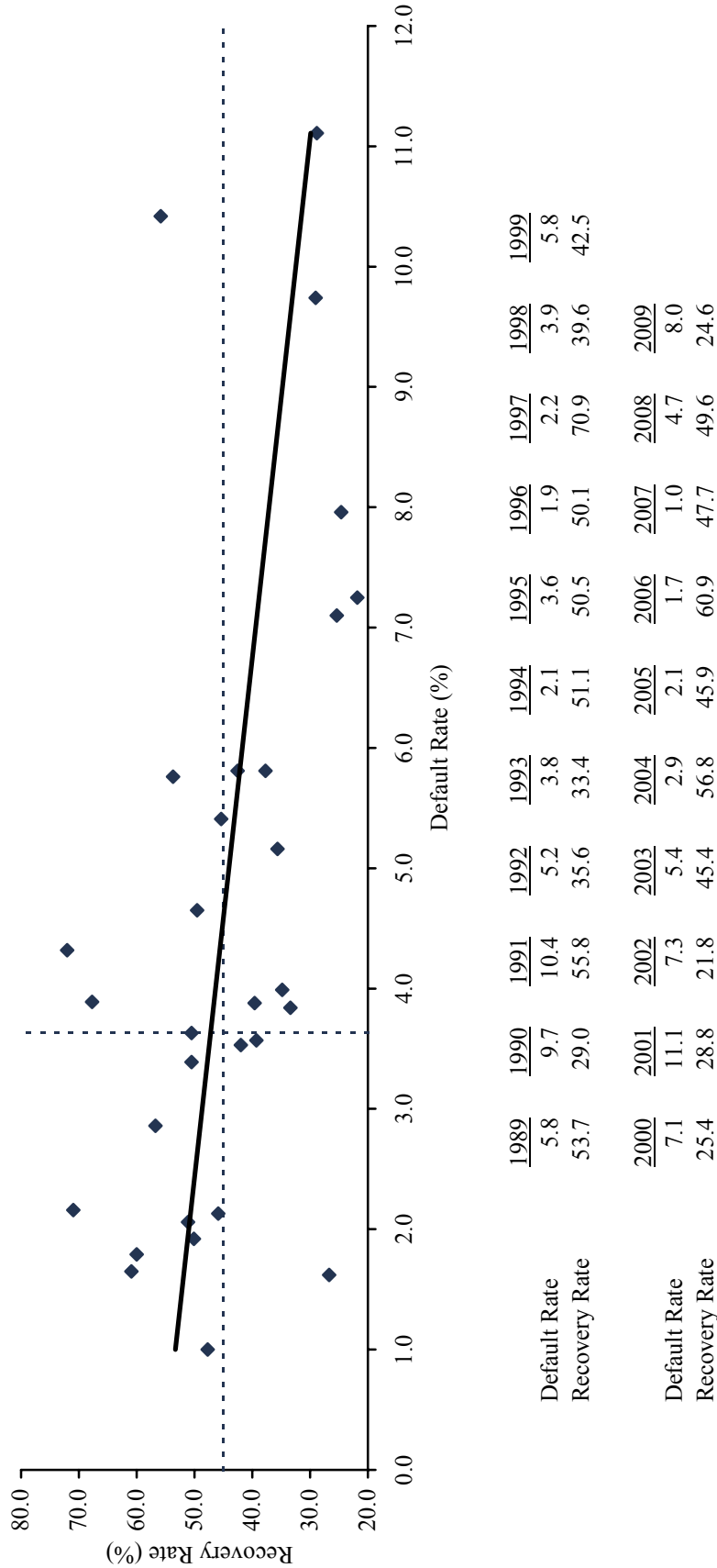
DEFAULT RATE SCENARIOS FOR U.S. HIGH-YIELD BONDS



Sources: Cambridge Associates LLC and Moody's Investor Services.

Notes: Scenarios assume that defaults peak in six months from starting point. Default rate refers to percentage of speculative-rated issuers defaulting in the trailing 12 months. Global high-yield bonds are used for the 1933 default path.

**Table M**  
**RECOVERY RATES AND ANNUAL DEFAULT RATES FOR HIGH-YIELD BONDS**  
**January 1, 1978 – March 31, 2009**



Sources: Edward I. Altman - NYU Salomon Center, Bloomberg L.P., and Moody's Investors Service.

Notes: Format adapted from Garman Research. Rates for 2009 are through March 31.

**Table N****ESTIMATED TWO-YEAR ANNUALIZED RETURNS FOR HIGH-YIELD BONDS IN VARIOUS SCENARIOS OF DEFAULT LOSS AND YIELD CHANGE****Gross Annualized Estimated Return**  
(After Default Losses but Before Fees and Transaction Costs)

	<u>Scenario 1: Defaults Are Average of Prior Downturns</u>	<u>Scenario 2: Defaults Are 50% Worse Than Prior Downturns</u>
Scenario A: Yields decline at historical average pace	<b>14.8%</b>	<b>10.8%</b>
Scenario B: Yields do not contract	<b>4.9%</b>	<b>0.8%</b>

**Assumptions for Yield Scenarios**

Scenario A: Yields decline by 37.5% over the next two years  
(from 13.7% today to 8.6% at the end of Year 2)

Scenario B: Yields are steady

**Assumptions for Default Loss Scenarios**

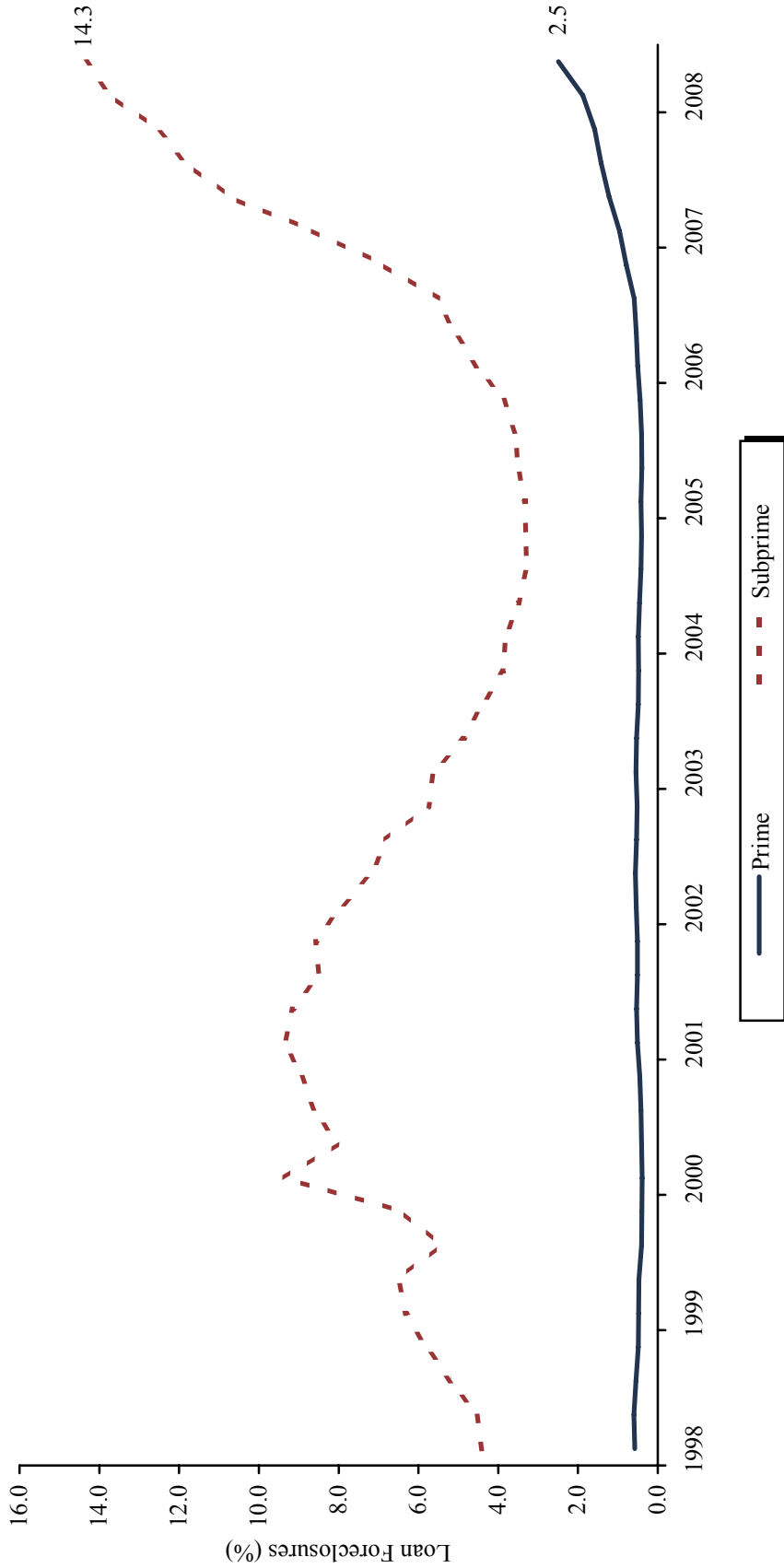
Scenario 1: Default rate is average of 1933, 1991, and 2002 default downturns  
Defaults peak at 13.6% in six months  
Year 1 defaults are 11.0%, Year 2 defaults are 5.2%  
Recoveries are 15% in Years 1 and 2 (lower than prior troughs)

Scenario 2: Default rate is 150% of average default downturn  
Defaults peak at 20.4% in six months  
Year 1 defaults are 16.5%, Year 2 defaults are 7.9%  
Recoveries are 10% in Years 1 and 2 (markedly lower than prior troughs)

Source: Cambridge Associates LLC calculations, using historical data from Barclays Capital and Moody's Investor Services.

Note: Assumes any yield changes occur smoothly.

**Table O**  
**PRIME AND SUBPRIME LOAN FORECLOSURES AS A PERCENTAGE OF TOTAL LOANS**  
**Fourth Quarter 1998 – First Quarter 2009**



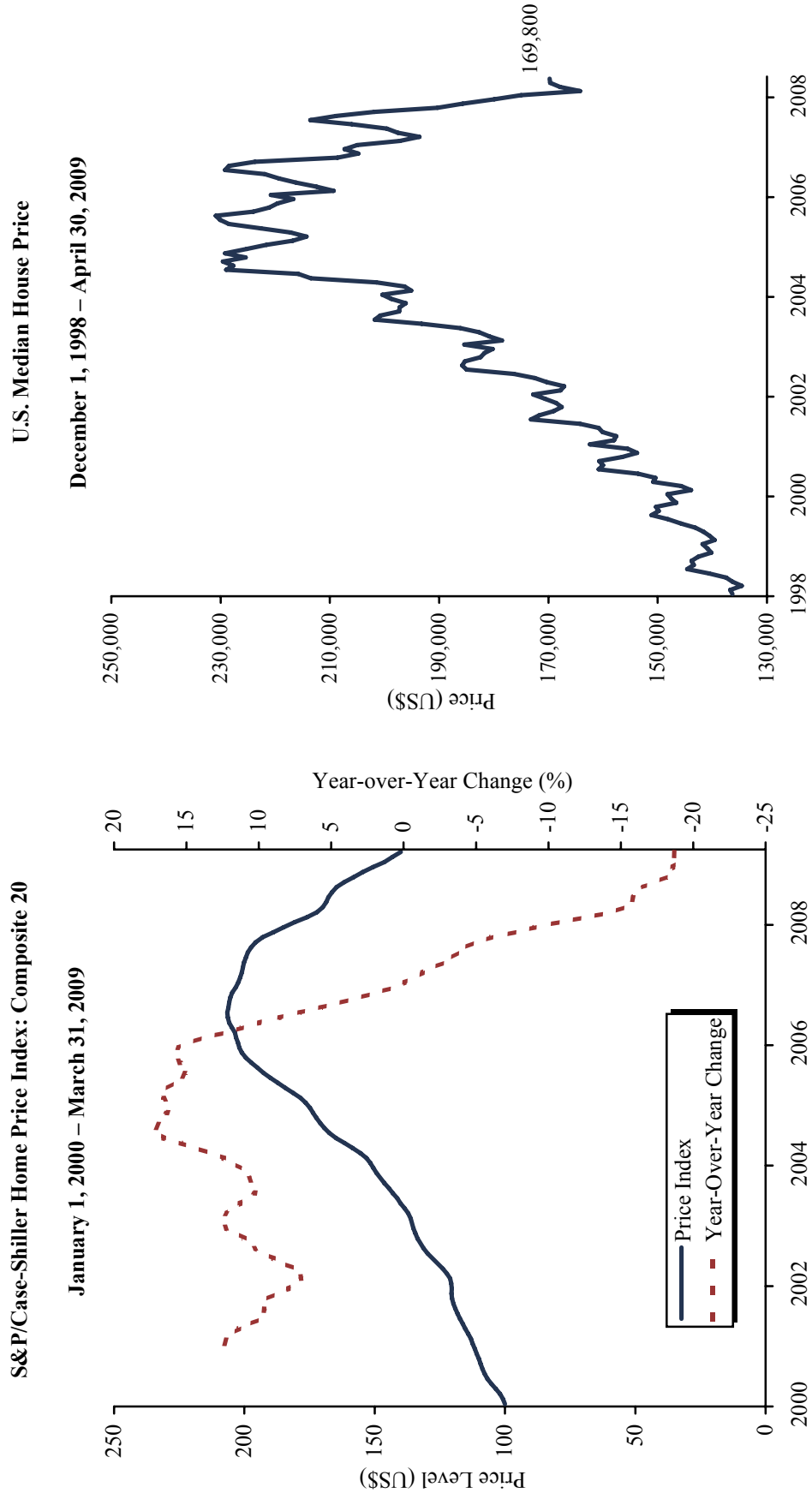
Source: Bloomberg L.P.

Note: Graph is based on quarterly data.



Table P

U.S. HOME PRICE TRENDS

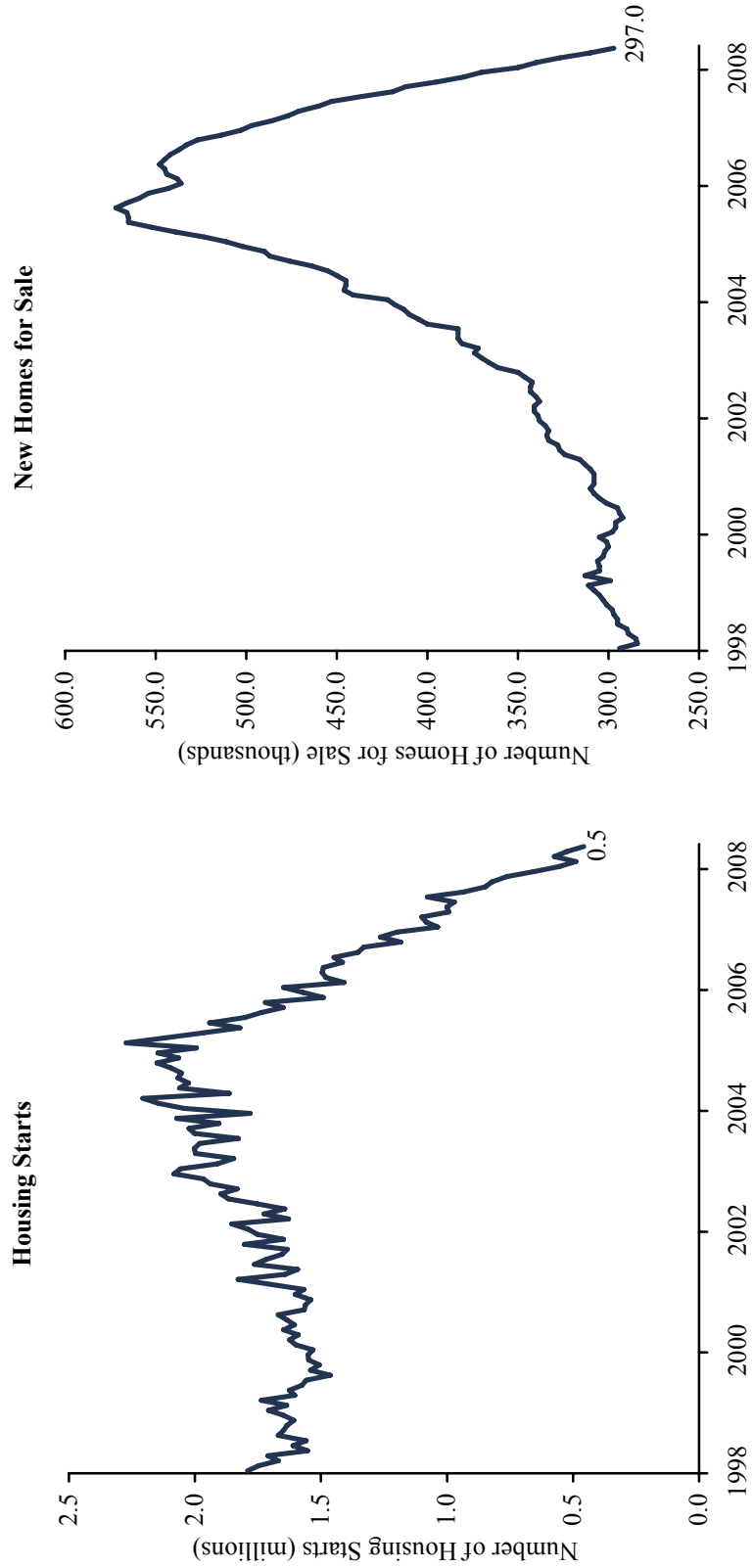


Source: Thomson Datastream.

**Table Q**

**U.S. HOUSING STOCK**

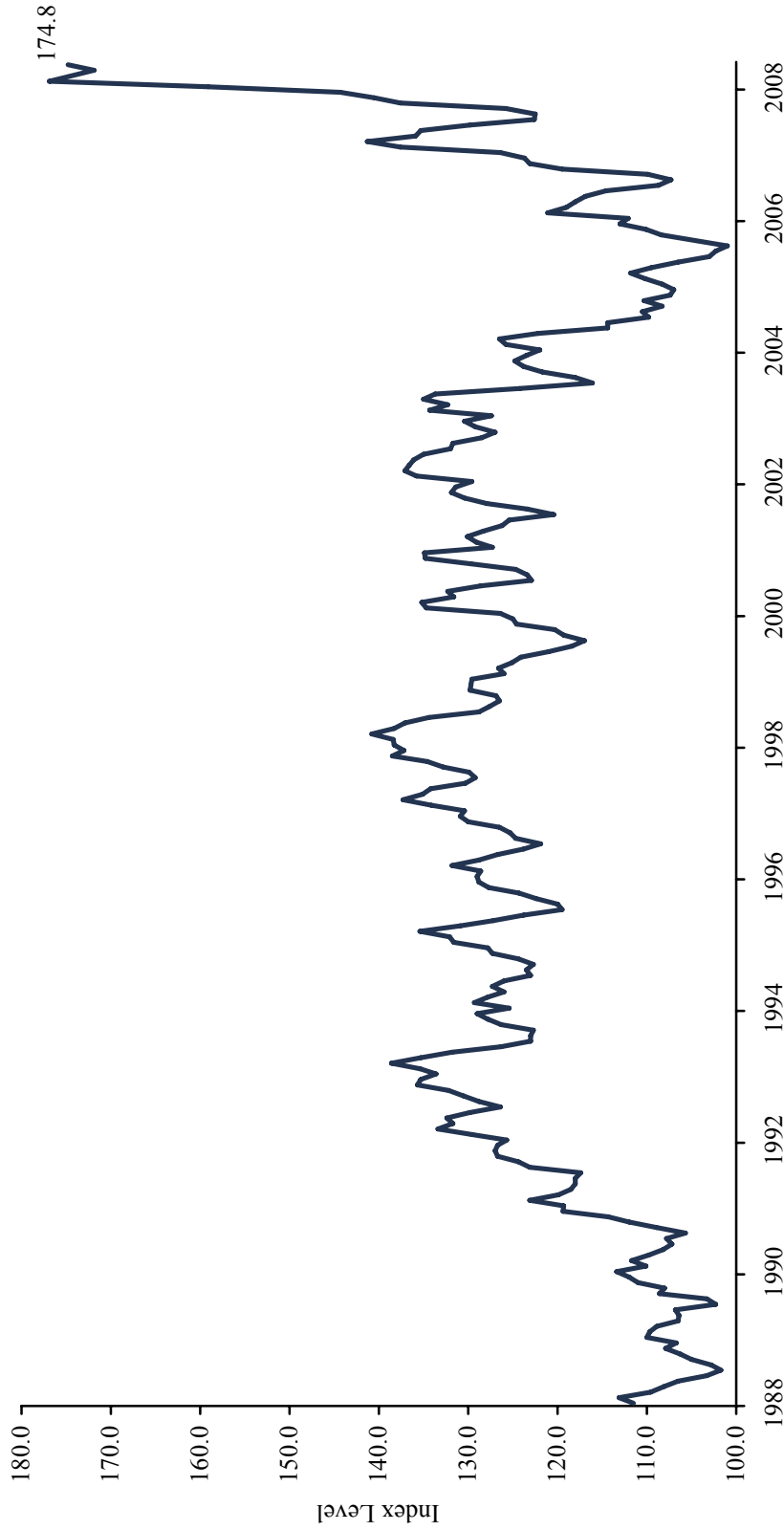
**December 31, 1998 – April 30, 2009**



Sources: FactSet Research Systems and Thomson Datastream.

Note: Data are seasonally adjusted.

**Table R**  
**HOUSING AFFORDABILITY INDEX**  
**December 31, 1988 – April 30, 2009**



Source: Thomson Datastream.

Notes: The Housing Affordability Index is compiled by the National Association of Realtors. An index value of 100 indicates that a family with the median income has exactly enough income to qualify for a mortgage on a median-priced home. An index value above 100 indicates that a family earning the median income has more than enough income to qualify for a mortgage loan on a median-priced home. The index assumes a 20% down payment of the median home price, and a qualifying ratio of 25%. An increase in the level of the index indicates that a family with median income is more able to afford the median-priced home.

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## Appendix A: Term Asset-Backed Securities Loan Facility (TALF)

The U.S. government launched the Term Asset-Backed Securities Loan Facility (TALF) to rebuild demand for the securitized debt market, which accounted for 60% of credit growth over the eight years ended December 31, 2008, before grinding to a halt late last year (Tables A-1 and A-2). In particular, the TALF was started to revive, and so far all issuance has been related to, the asset-backed securities (ABS) market including securitization of credit cards, auto-related loans, and student loans. The Federal Reserve Bank of New York (NY Fed) will lend up to \$200 billion on a nonrecourse basis (to be extended to as high as \$1 trillion) to holders of certain ABS rated AAA and now new and legacy (issued before January 1, 2009) commercial mortgage-backed securities (CMBS) rated AAA. It is also expected that the program will be extended to the residential mortgage-backed security (RMBS) market, although no information regarding details of such proposals is available at present. The loan facility has been used to promote issuance of the highest-quality securitized loans and has not been used in relation to distressed assets. However, the Public-Private Investment Program (PPIP), which is intended to facilitate the removal of risky and/or impaired assets from the balance sheets of financial institutions is expected to use leverage from the TALF to enhance potential returns. (See Appendix B for a discussion of PPIP.)

The TALF was slow to spark interest and the first two loan application periods saw very low volume. However, in May, loan applications totaled \$10.6 billion, bringing loans outstanding to \$15.9 billion. Loan applications requested at the June 2 facility totaled \$11.5 billion. Spreads on most TALF-eligible assets have come down significantly, which should induce interest in consumer borrowing, but should also reduce the return potential for purchases of new securities. Pricing between now and year-end, when the loan program is scheduled to end (unless it is extended), is uncertain, as fundamentals continue to weaken, albeit at a declining rate. It is certainly possible that spreads will again widen should markets once again get jittery about the prospects for the economy, unemployment, and defaults on eligible securitized assets. (See Tables A-3 and A-4.)

### How the Program Works<sup>1</sup>

Investors are able to buy newly or recently issued approved ABS and CMBS rated AAA, and starting in July, legacy CMBS. The securities are purchased on a leveraged basis using nonrecourse loans provided by the NY Fed with the securities held as collateral. The NY Fed requires a haircut, which varies based on the type of collateral and its maturity. The loan value is equal to the price of the security less the haircut, or required equity capital, expressed as a percentage of a security's value. Haircuts range from 5% (or 19 times leverage) to 16% (5.25 times leverage) on newly issued ABS securities. For newly issued and legacy CMBS, haircuts are 15% for securities with a remaining average life of five years or less, with 1 percentage point of required equity capital added for each additional average year of life. In the case of newly issued securities, the haircut is applied to the lesser of par value or market value of the ABS to be pledged as collateral. For example, if the par value is \$100 million and the market value is \$90 million, the 10% haircut would apply to the market value and investors would need to invest \$9 million in equity capital to receive a loan of \$81

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<sup>1</sup> See Table A-5 for a schematic of the TALF mechanics.

million. When the market value is above par value, the haircut will apply to the market value of the security, but is capped at 110% of par. In the case of legacy CMBS, the haircut is applied to the par value of the loan, such that legacy securities sold at a discount to par have a higher haircut when calculated relative to the collateral, reflecting the Federal Reserve's efforts to mitigate its balance sheet risk given the presumably higher default risk associated with more discounted securities. For example, if par of a security is \$100 and market value is \$75, a 15% haircut would apply such that the loan value equals \$60 ( $\$75 - \$15$ ), or a collateral value haircut of 20% ( $\$15 \div \$75$ ).

The loans for purchasing securities through TALF are nonrecourse. As such, the debt carries no demands for additional collateral if the value of securities decline, as the collateral is not marked to market. The program attempts to minimize "basis risk," by offering a range of debt maturities that are fixed or floating to facilitate better matching of asset/liability cash flows and maturity. While specifics differ for student loans and small business loans, appropriate ABS collateral is eligible for one-, two-, or three-year loans on fixed or floating terms at a cost of Libor plus 100 basis points (bps). The applicable Libor rate is the swap rate of the loan maturity for fixed-rate loans and the one-month Libor rate for floating-rate loans. However, eligible CMBS purchases will be financed using three- or five-year fixed-rate loans only. Borrowers may choose from these available options. The NY Fed also charges a 5 bp annual administrative fee.

Interest payments on the entire value of the securities, net of financing costs, go to investors. A prorata share (based on the haircut) of any principal payments must be used to pay down the loan. For example, for securities with a haircut of 15%, 85% of any principal payment must be used to pay down the loan. This serves to keep the leverage ratio constant. Loans collateralized by CMBS securities (new and legacy) have accelerated, or "turbo" principal payment requirements.

Loans can be repaid early in full or in part with no penalty. The nonrecourse nature of the loan is comparable to a put option written by the NY Fed with a strike price equal to the haircut dollar value. For example, if at maturity the value of a security plus initial equity capital is inadequate to repay the loan, it would be more economical to put the securities back to the NY Fed to settle the loan. If \$100 million of securities purchased with \$5 million equity capital and a \$95 million loan were worth only \$85 million at the loan maturity, a participant in the TALF would logically choose to put the security back to the NY Fed. Such an investor would lose his \$5 million in equity capital, which must go to repay the loan, but would not have to pay an additional \$5 million in excess of the security value to repay the loan in full.

As currently designed, financing from the NY Fed will be available to be originated through the end of this year. Assets are nontransferable after year-end, so most TALF products are illiquid with a relatively long (e.g., three- to five-year) time horizon. Depending on the manager, a portion of the income may be distributed during the life of the fund, but the bulk of the assets will be locked up for the duration of the TALF loans, which range in duration from one to five years.

Details on the extension of the TALF to the CMBS and RMBS markets, particularly for pricing of legacy securities, are still to come. We continue to monitor developments closely.

## The Joy and Pain of Leverage

The TALF program is attractive because of the high leverage available on a nonrecourse basis and with maturity matched to the security. Interest paid by securities goes fully to the investor, while the downside is limited to a loss of all equity capital. Leverage is readily available and reasonably priced with attractive terms, and basis risk is reasonably manageable, particularly for shorter-life and/or first pay securities, especially if credit analysis protects investors from late payments that may extend the life of the security beyond that of the loan. Further, the nature of the underlying securities provides a default cushion, making the returns very attractive under most environments. However, the high leverage will also make for terrible results should defaults on a securities pool exceed a minimum level by a relatively small degree. For example, all securitized products have credit enhancements as part of their structure. They can take many forms, including overcollateralization, excess spread, use of reserve accounts, etc. Further, only the most senior, most highly rated, securitized products are eligible for inclusion in the TALF program, providing another margin of safety. However, most eligible securities are still based on rating agency assessments and most securitized assets, even those that are newly issued, continue to suffer from agency issues in which those providing access to credit do not keep much, if any, economic interest in the loans.<sup>2</sup> Still, auto loans tend to have 4% to 10% credit enhancement for prime issues (which may increase over the life of the security), while credit cards have 12% to 22% in subordinated tranches, while excess spread and early amortization can provide for further credit enhancement.

The following simplified example should provide a clearer appreciation of the risk/return trade-offs of TALF-provided leverage.

Prime credit card ABS par value: \$100 million  
Market price of ABS at purchase: par  
Haircut: 6%  
Credit card subordination plus excess spread: 20%  
Financing cost: Libor + 100 bps  
Asset spread over Libor: 175 bps  
Three-year Libor swap rate: 200 bps

In this example, an investor would put up \$6 million in equity capital and borrow \$94 million from the NY Fed, posting the ABS as collateral. The headline average annual compound return on the equity capital (before fees, charges, and any adverse credit or tax events) would be 13.6% assuming par is fully returned at maturity, all income is paid, and yields stay stable. Losses on credit cards in the securitization pool, which are highly sensitive to the unemployment rate, could increase to 20% and the return on this investment would still be 13.6%. However, should losses increase to 21%, the return on this investment would drop to 9.1%; a 25% loss would produce a -14.2% return; and a loss of 26% or greater would produce an annualized return of -22.5%, for a total cumulative return of -53.5%, in which all of the equity capital

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<sup>2</sup> CMBS are an exception.

would be lost.<sup>3</sup> For any loss greater than 26%, the return to equity investors would be the same as in this simplified example (a total loss) because the security is puttable back to the NY Fed. (See Table A-6.)

This example makes clear how important a manager's credit analysis is in investing in securitized assets in general, but in TALF funds in particular because of the use of leverage. Even with exceptional credit analysis, it is not impossible to envision downside economic scenarios in which defaults are high enough to pierce through these protections. Further, there are cases in which returns could be negative even if there were no defaults. The greater the net spread and the greater the leverage supplied by the NY Fed, the higher the prospective headline return on the TALF investment. At the same time, the lower the spread, the higher defaults, and the greater the leverage, the greater the risk of low or negative returns. In the same example posed above, even with no defaults, if assets were purchased at a spread of 75 bps over Libor instead of 250 bps, the return would be negative (-1.2%), because the cost of financing would be higher than the interest produced by the assets. Pricing discipline and credit analysis are crucial.

## Conclusion

In sum, the main advantages and considerations are as follows:

### Advantages

- **Attractive financing.**
  - Assets are not mark-to-market. No need to post additional collateral to meet margin requirements.
  - Substantial leverage, as much as 20 times equity capital, provided by government financing enhances yield prospects.
  - Maximum loss equals 100% of equity capital because nonrecourse leverage acts like a put option with a strike price equal to the equity capital put up by investors.
- Skilled investors can choose issues/tranches, which may add a margin of safety.
- Assets will amortize and loans can be prepaid without penalty.
- Majority of targeted assets are familiar to experienced managers (i.e., Blackrock, PIMCO).
- **U.S. government commitment.** The government needs TALF to work to foster a rebirth of the consumer economy, potentially increasing the possibility of program enhancements to attract investors. The Fed can change borrowing terms to keep target return on equity (ROE) constant even if purchase prices rise.

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<sup>3</sup> We make the simplifying assumption that there is no change to the income paid by the security. The loss only affects the return of principal at the loan's maturity.

## Considerations

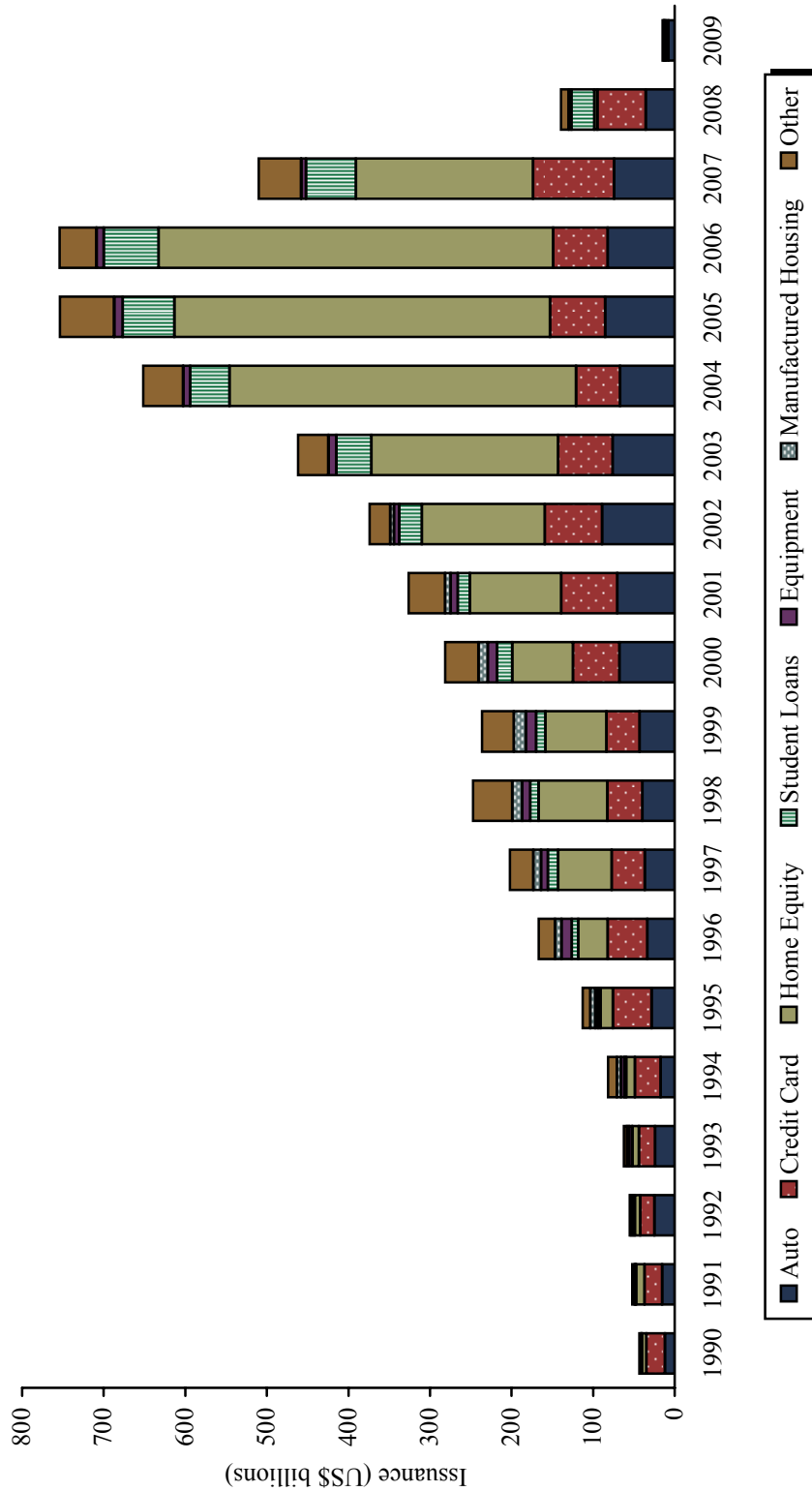
- **Extensions.** The weak economy could disrupt cash flows and collateral, resulting in extension issues (the life, or term, of the underlying collateral loan gets extended), leading to a mismatch of loan terms and asset life. This mismatch already exists for many CMBS legacy securities.
- **Pricing.** Fundamentals are still deteriorating in many ABS markets. Little, if any, relevant historical data are available to guide investors on the likelihood of defaults and relationships between the economic variables and the level of defaults.
- **Leverage.** Should defaults increase beyond subordinate debt/credit enhancements, a low level of additional defaults would result in a total loss of equity capital. Positive carry on the investment (i.e., investment income net of financing costs) may make up for some of this loss, but expected returns under such conditions would remain negative.
- **Illiquidity.** The managers' loan positions are not assignable after December 31, 2009, reducing their flexibility. Illiquidity of investments should demand a liquidity premium.
- **Credit risk.** Given the current difficult environment, it is questionable as to how much capacity truly creditworthy consumers have to borrow, suggesting that either issuance may be slower than anticipated and/or credit quality may be lower than AAA ratings indicate. Reliance on rating agencies continues to pose a risk that must be mitigated by managers. However, the Fed will be selective on acceptable collateral for CMBS issuance.
- **Due diligence.** Investors have limited time to evaluate the program and manager offerings.
- **Fees.** Some managers are charging performance-based incentive fees. Consider that cheap nonrecourse leverage allows for a high ROE. Increasing the nonrecourse leverage increases the incentive-based fees significantly more than the required additional credit skill needed to achieve these higher returns.
- **Headline risk.** Public and congressional reactions to program results are unpredictable, creating some headline risk potential.
- **Political risk.** The U.S. government could change rules. Congress could impose windfall profit taxes.

There will likely be significant opportunities for high returns through the TALF program. Assuming that losses on these securities remain below the critical levels protected by various credit enhancements, leverage will provide highly favorable results, particularly for investments made at high asset spreads. As noted, spreads have been declining since the announcement of the TALF program; however, it is uncertain as to how pricing will evolve over the remainder of the TALF lending period. Given the use of leverage, even with the put protection, the distribution of possible returns is quite wide and subject to a high degree of estimation error. These markets are relatively new and the margin of error on estimating defaults based on models and historical relationships to economic variables is high. In our view, the corporate debt market offers a better risk/return trade-off. TALF investments generally target an ROE in the mid-teens for ABS, and higher for CMBS and RMBS, perhaps in the low to mid-20s (at least based on manager expectations). At the same time, corporate distressed investments offer potential for mid-teens returns with a relatively narrow risk distribution, no leverage, and potentially greater liquidity. TALF managers with very disciplined pricing



and strong modeling and credit analysis skills should do well, potentially very well, but as is the case for all distressed investing, manager selection will be critical. Given the unconventional risks, such as headline risk and windfall profit tax risks, associated with such an investment, and given the reasonably attractive opportunities in other distressed markets that can be achieved with little or no leverage, high manager conviction is a must.

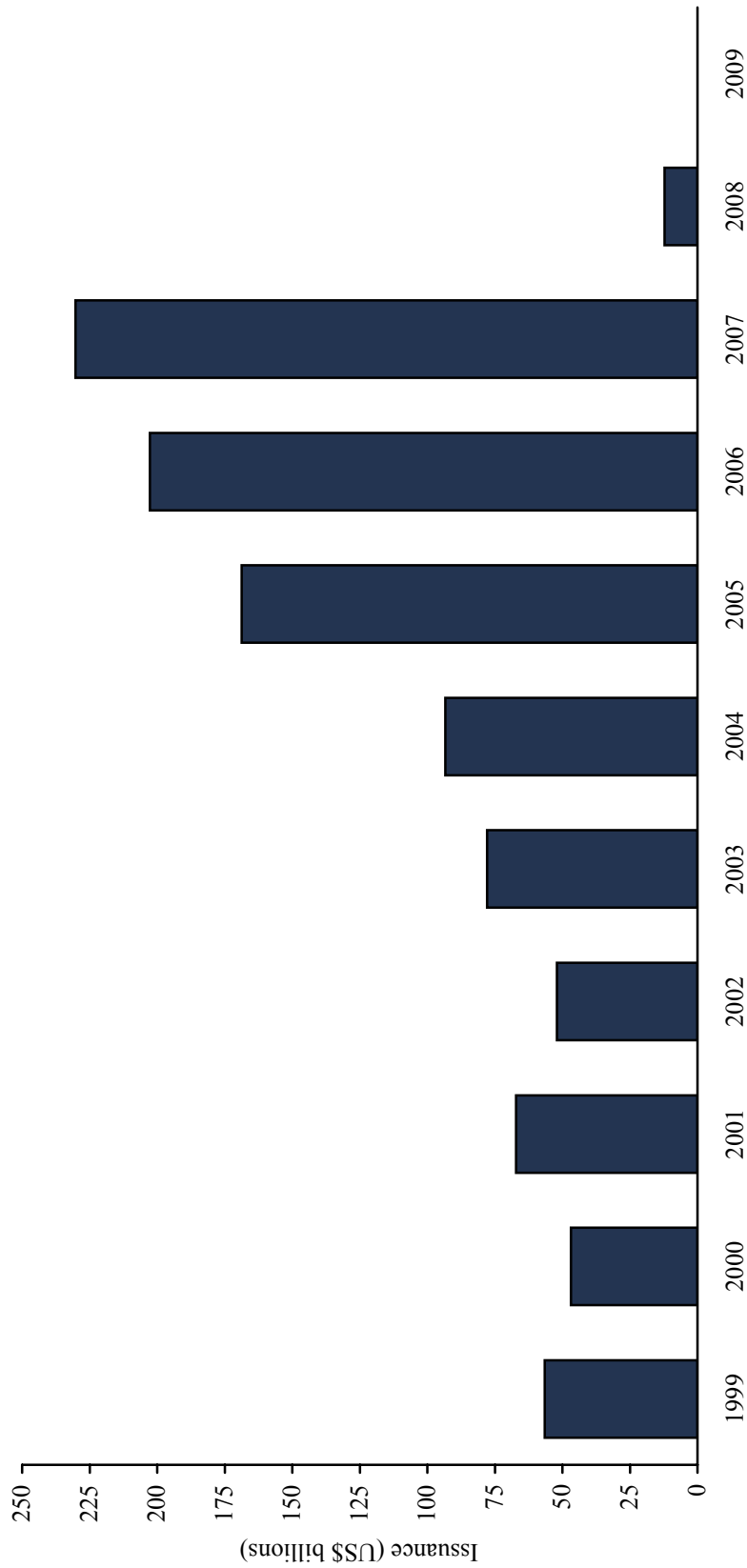
**Table A-1**  
**ISSUANCE OF ASSET-BACKED SECURITIES**  
**1990–2009**



Source: SIFMA.

Notes: Graph represents annual data. Data for 2009 are through March 31.

**Table A-2**  
**ISSUANCE OF COMMERCIAL MORTGAGE-BACKED SECURITIES**  
**1999-2009**



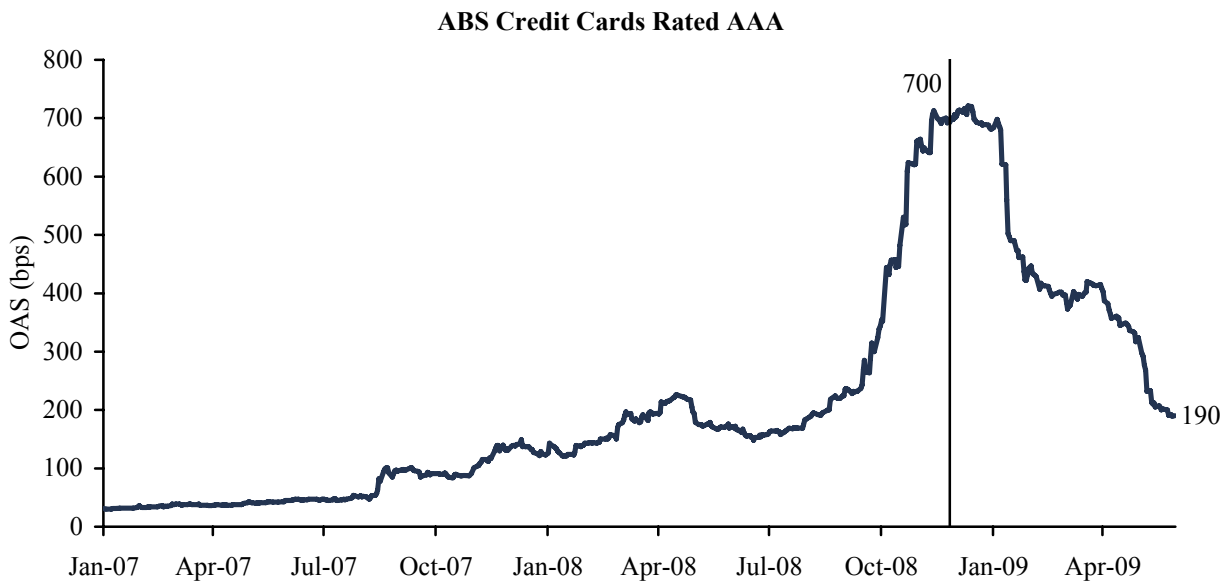
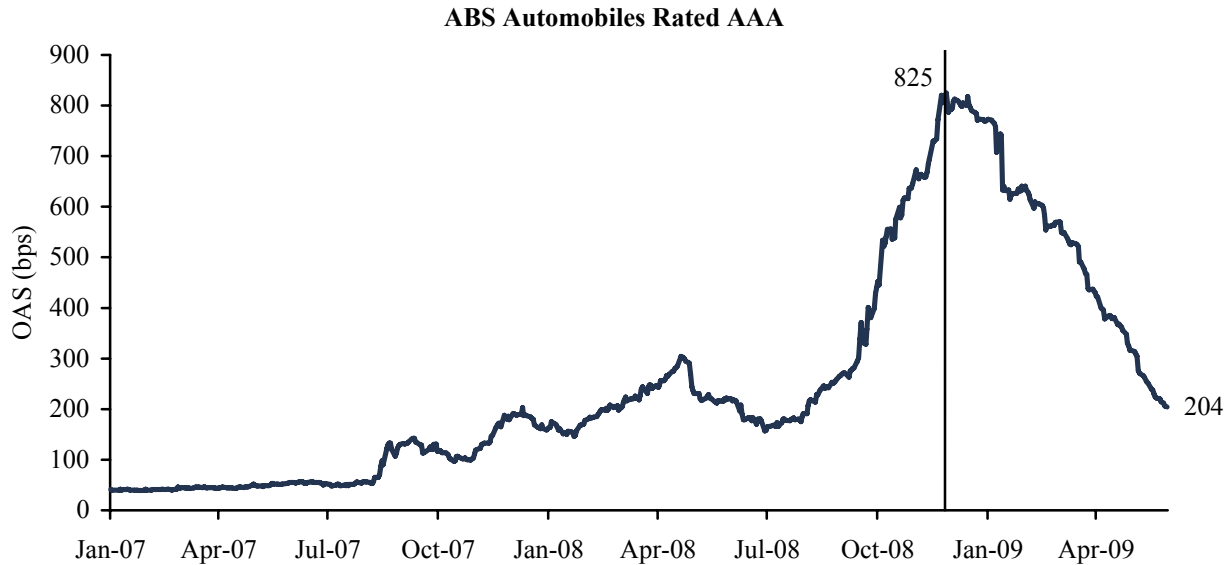
Source: Commercial Mortgage Alert.

Notes: Graph represents annual data. There has been no issuance of commercial mortgage-backed securities through March 31, 2009, the most recent date for which data are available.

Table A-3

## ASSET-BACKED SECURITIES OPTION-ADJUSTED SPREADS RATED AAA

January 1, 2007 – May 31, 2009

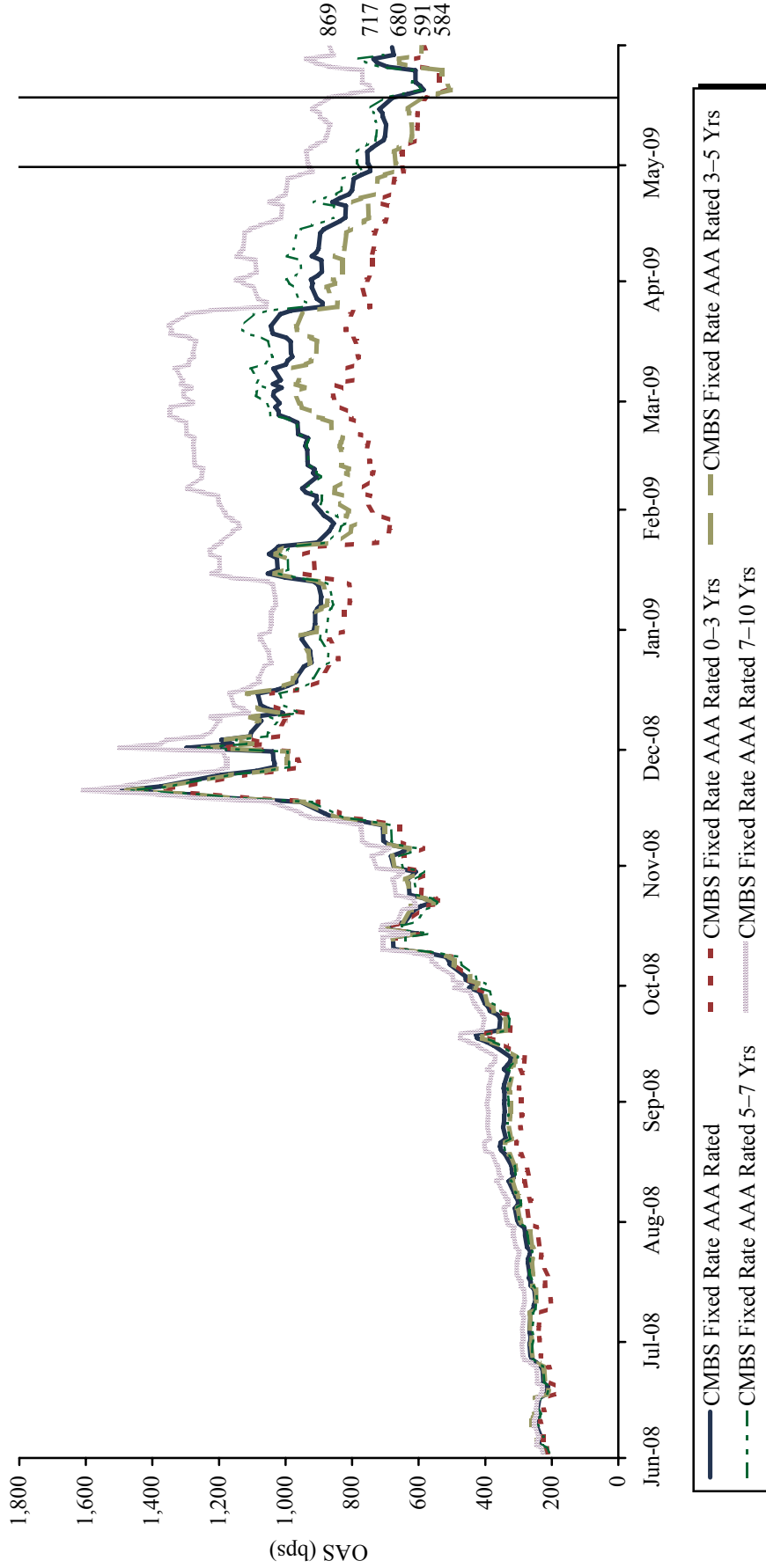


Source: Merrill Lynch &amp; Co.

Notes: Graph represents daily data. Line runs through November 28, 2008, the day the Fed announced TALF for these types of securities.

**Table A-4**  
**COMMERCIAL MORTGAGE-BACKED SECURITIES OPTION-ADJUSTED SPREADS RATED AAA**

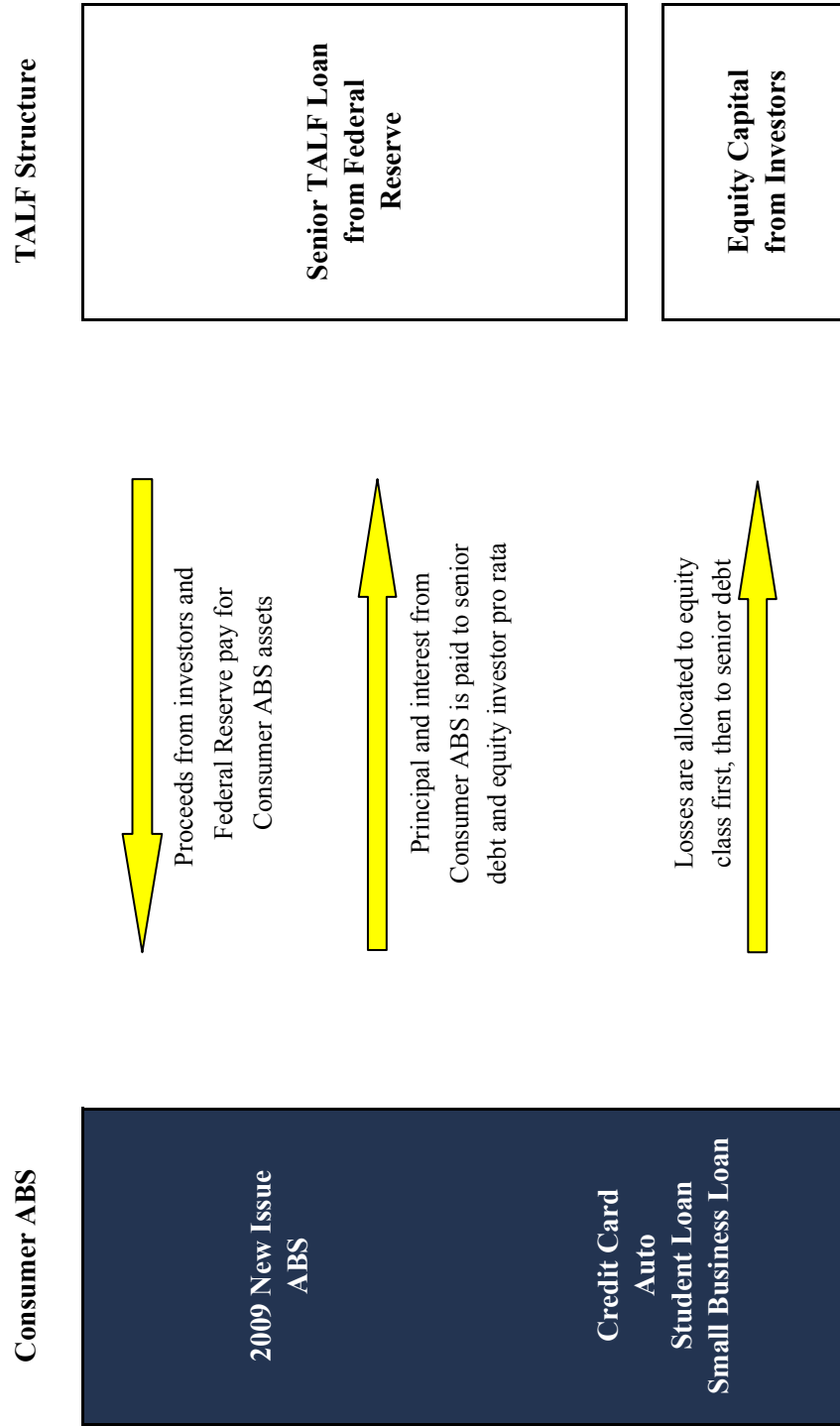
**June 1, 2008 – May 31, 2009**



Source: Merrill Lynch & Co.

Notes: Graph represents daily data. Vertical lines represent May 1, 2009, when the Federal Reserve announced that newly issued commercial mortgage-backed securities (CMBS) were eligible for TALF financing, and May 19, when the legacy CMBS terms and conditions were released, respectively.

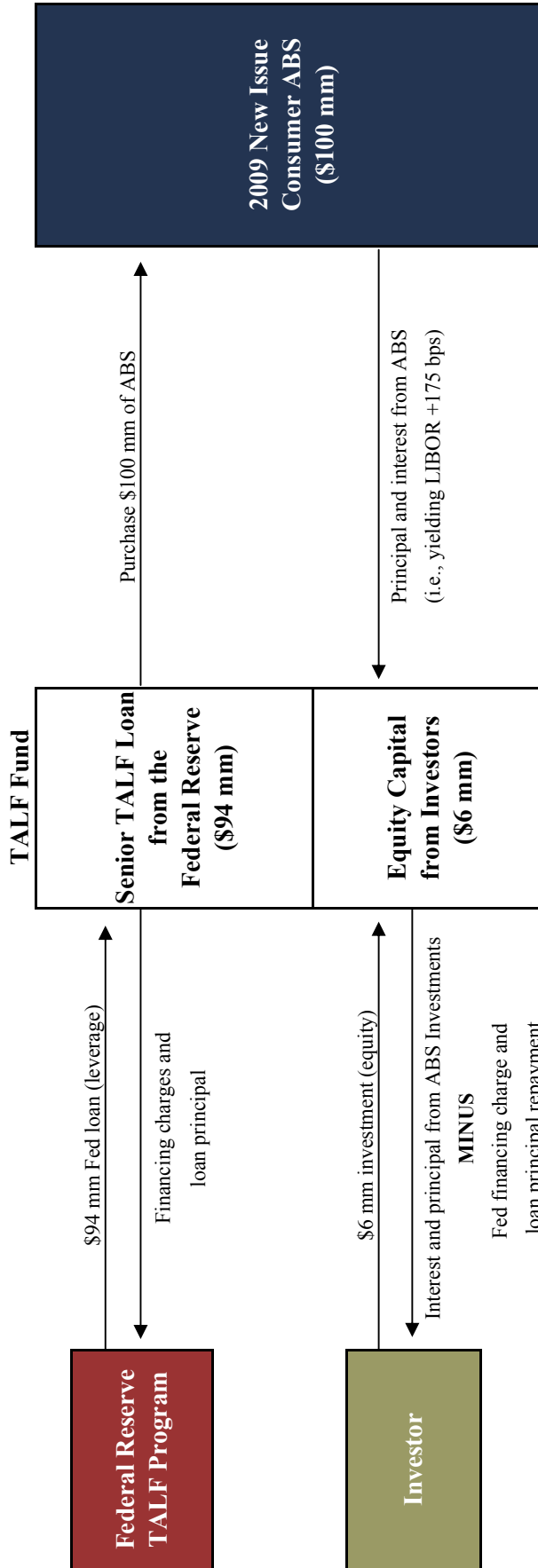
**Table A-5**  
**TALF STRUCTURE**



Source: Declaration Capital.

**Table A-6**  
**TALF EXAMPLE**

- Investor puts up \$6 mm to buy ABS; the Fed will loan a further \$94 mm. The TALF Fund Manager buys \$100 mm of ABS.
- ABS yield LIBOR + 175 bps and the Fed is charging LIBOR + 100 bps for the loan. The headline return on the investment (before manager fees, charges, and any adverse credit or tax events) will be 13.6%.
- However, this scenario could be very different if defaults rise and spreads between yields on ABS and the Fed loan are tighter.
- **Pricing discipline and credit analysis by the manager are crucial.**



## Appendix B: Public-Private Investment Program (PPIP)

In October 2008, Treasury Secretary Henry Paulson established the Troubled Asset Relief Program (TARP) to purchase “toxic assets” from banks, presumably at prices lower than the banks’ marks but higher than the true market-clearing price. After much debate and criticism of the original plan, this plan has essentially morphed into what is now called the Public-Private Investment Program (PPIP).

The idea behind PPIP is that managers will establish funds of institutional and perhaps retail investors. Those funds will then get leverage from the U.S. government on attractive terms, and will use that financing, together their own equity capital from the funds’ investors and a matching equity contribution from the Treasury, to purchase legacy (that is, not newly issued) home loans and mortgage securities from banks. (See Table B-1 for a schematic of PPIP mechanics.)

A large number of managers applied to be part of PPIP, and the Treasury is reportedly now going to announce the initial selected participants in June, rather than in mid-May as they had originally planned. We expect that the firms in the hunt initially will generally be those with a large client base and substantial resources to evaluate and manage complex structured securities (or in some cases, boutique firms that partner with larger firms).

PPIP is fairly complex, despite the fact that a great many important details have yet to be disclosed or determined. The unknown details make it impossible to properly evaluate the attractiveness of the program. Unfortunately, the window between the release of PPIP details and the first closing of related funds is likely to be fairly short, compressing the time that limited partners will have to evaluate the funds and determine whether to participate.

The PPIP Legacy Securities program, which focuses on mortgage securities rather than on whole loans, is likely to be of broader interest to clients than the Legacy Loans program, which has recently been put on hold by the government. The managers with whom we have spoken that have applied to manage PPIP Legacy Securities funds are excited about the prospects and believe they would be able to target mid-20% returns net to investors, probably higher than the base-case net returns available from conservatively managed Term Asset-Backed Securities Loan Facility (TALF) funds.

Like us and everyone else, these managers are in the dark on some important details:

- How much leverage will be available and under what terms? For example, the Treasury has hinted that additional financing may be available under the TALF program, but details of this are scant and confusing right now.
- How will Treasury’s equity participation be structured, in particular the warrants that Treasury will require of participants?
- How will prices be set?



There are some details that are unlikely to be clear until after the program is underway and investors have committed capital. These are significant questions and concerns:

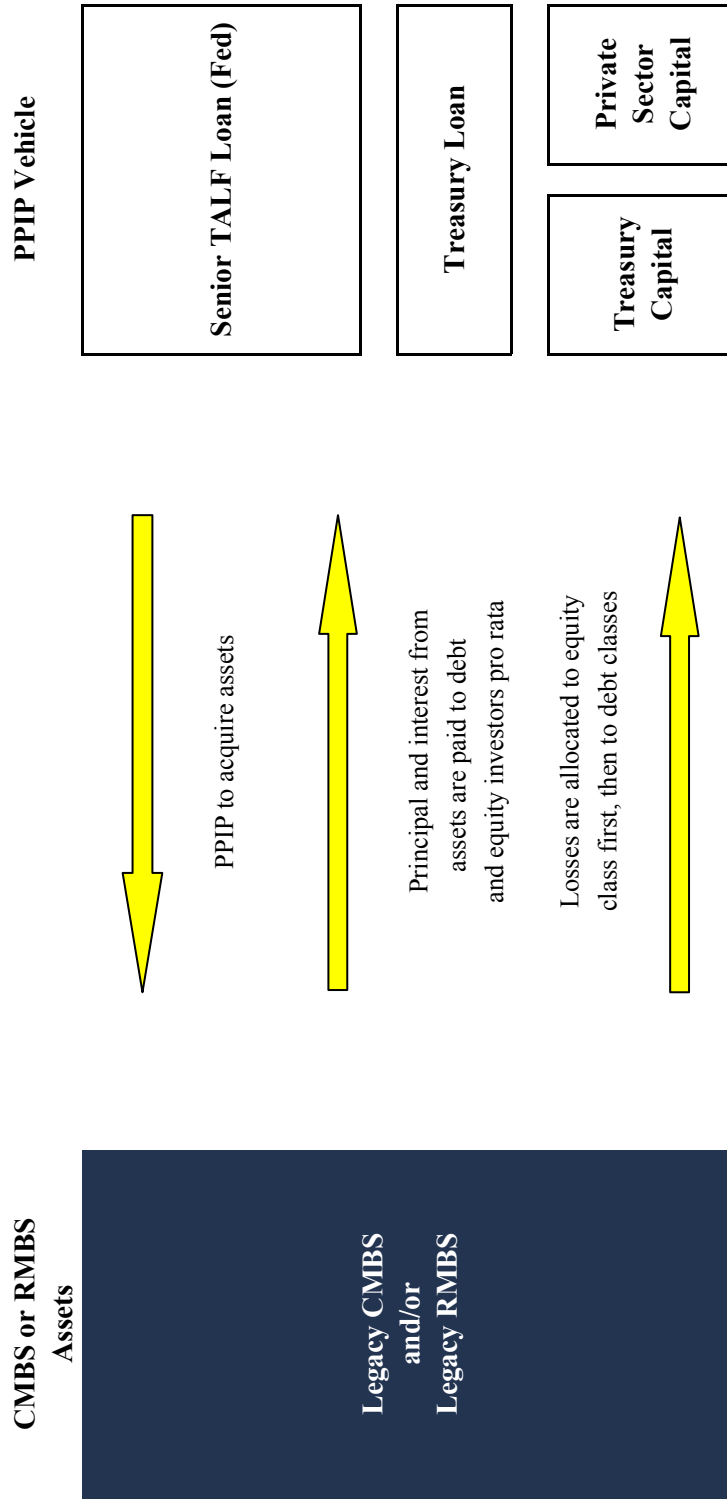
- How receptive will the future political environment be to investors that profit by buying, with government assistance, securities that pool the mortgages of struggling homeowners? We cannot rule out the possibility that “excess” or “windfall” profits may be targeted for recapture by taxpayers or homeowners in some manner, or that investors in the funds will be subject to a high degree of scrutiny.
- Will future government and judicial activities be favorable or harmful to holders of mortgage securities?

Some general thoughts, pending the important details that are yet to be worked out or disclosed:

1. Investors in these funds must be careful, because even if there are opportunities for the best managers to make very attractive returns, this may not be the broad, beta opportunity that some investors may be anticipating. There will probably be low-hanging fruit, but not all of it will be edible.
2. Investors and managers that do pursue the best opportunities may eventually find themselves in an uncomfortable spotlight.
3. Supply of securities may be adequate, thin, or enormous. Banks may be reluctant to unload the securities unless (1) they have already marked them at lower prices or (2) they are under pressure from their regulators to do so. We would not be surprised if regulators used the PPIP structure and the stress test to force a purging to clean up balance sheets, but this is speculative on our part.
4. Investors should also be wary of reliance on leverage for results. Unlevered potential returns from higher-quality mortgage securities may not be high enough in some cases to provide returns attractive to investors in lock-up partnerships and to their general partners, but if these securities do not have good unlevered return on assets prospects, you should be leery of making the investment case purely through levered return on equity. The leverage terms available through TALF and most likely through PPIP are attractive, because the duration is appropriate relative to the assets, they are nonrecourse, and they do not subject the borrower to margin calls or tests related to market value. But if some of these securities do not have attractive risk/return characteristics unlevered, the leverage does not fundamentally change that profile. One very important area where we have seen some confusion is regarding the maximum losses in a leveraged situation. If a fund invests \$1 million to buy \$10 million of securities with a 10% haircut and nonrecourse financing, it is true that the fund’s maximum loss from that particular investment is \$1 million, rather than \$10 million. But if the entire fund’s capital is invested in this fashion, it is not at all true that the maximum loss is 10%. The maximum loss in that case is 100% of the fund’s capital. And that 100% loss of equity capital would occur if the return on assets from each security was -10%.

**Table B-1**  
**PPIP STRUCTURE (SECURITIES)**

- How much leverage will be available and under what terms?
- How will Treasury's equity participation be structured, in particular the warrants that Treasury will require of participants?
- How will prices be set?



Source: Declaration Capital.