

You Have Now Entered the Bowie Bond Era

Is there still room for mortgage securities?

by Michael R. McCabe

THE WIZARDRY OF WALL Street's financial engineers consistently amazes the rest of the investor community. Time and again, these deal makers have demonstrated their ability to find "value" in the strangest places and then package and sell that value as **asset-backed securities (ABS)** to eager buyers.

Take, for example, the recent private placement of what the Street refers to as "Bowie Bonds." This February debt offering raised millions in immediate cash for rock-and-roll legend David Bowie, who owes much of his celebrity to the concert-tour personas he assumed—such as Ziggy Stardust and the Thin White Duke—during some of the most elaborately staged performances of the 1970s. In exchange for \$55 million, Bowie pledged to pay the **bond** investors all future **royalty** payments generated through the sale or public performance of his early recordings.

Credit-card and automobile-loan receivables long have served as collateral in public-debt

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securities. The Bowie Bond issue, though, represents but one in a recent string of privately placed asset-backed deals that convert future income streams from quirky collateral—including those from unsold Phillipine Airlines tickets, medical bills, campground membership dues, lottery winnings and tax liens—into tradable commodities. Deals like this have helped narrow the spreads between exotic bonds and more time-honored issues, such as mortgage-backed securities (MBS). When the market eventually turns down, as it undoubtedly will, the demand for the unusual asset-backed instruments will fall as investors seek refuge in low-risk products, such as Freddie Mac mortgage **participation certificates (PCs)**.

Until then, the Bowie Bond issue is making headlines as the first ABS supported by intellectual property. Prudential Insurance Company of America reportedly purchased the entire bond deal, which received a high-quality **A-3 rating** from Moody's Investor Service. Prudential will receive interest payments of 7.9 percent on its investment in exchange for taking on the risk of repayment from the earnings of a 50-year-old rock artist who is perhaps a bit beyond his peak.

So every time a radio station plays "Ch-Ch-Ch-Changes," a fan buys "Young Americans" on compact disc or a juke box lets loose with "Let's Dance," a royalty payment is made to the trustee administering the security, which then uses the cash to pay back the investor. This deal purportedly entitles the bond holder to receive the royalties—plus interest—from more than 250 of Bowie's songs appearing on 20 albums produced before 1990, until the \$55 million IOU is retired in 15 years. Recording-artist royalties usually range from 10 percent to 25 percent of the suggested retail list price for top albums, less an

assortment of negotiable deductions. A \$17 compact disc, for example, might yield a \$2.30 royalty.

Although a security backed by a rock star's royalties is unique in itself, the truly remarkable fact is that sophisticated institutional investors would stand in line to lend a sizable sum to Bowie at an interest rate of just under 8 percent. For that, they earn a slight 150-basis-point premium over the ultimate in risk-free investments, U.S. Treasury securities.

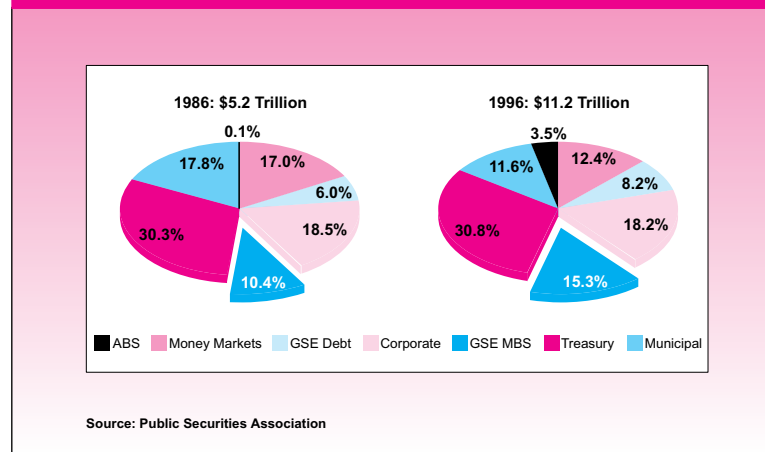
The Long and Short of It

How did the bond market arrive at a point where a rock-and-roll artist can borrow money at a rate that even the federal government is hard pressed to beat?

Two distinct trends—one permanent and long term, the other cyclical and of a shorter duration—provide some answers.

Better marketwide information has prompted the secular change in Wall Street behavior. Institutional investors now bring a high degree of sophistication to analyzing the risks and cash flows that structured-debt deals present to them. Similarly, issuers now are more adept at structuring cash flows and more willing to provide comprehensive disclosure information to investors. Out of this simultaneous understanding of risk on the parts of investors and issuers grew a profusion of bond types. The advent of better

EXHIBIT 1: U.S. Debt Outstanding Year-End Totals



The amount of U.S. bond-market debt outstanding more than doubled between 1986 and 1996, growing at an annual compounded rate of 8 percent. The growth rates for mortgage-backed securities (MBS) and asset-backed securities (ABS), at 12 percent and 61 percent, respectively, outpaced the total market.

informed bond-finance players has helped fuel the enormous growth in the debt market, which came close to tripling over the past decade. (Another big reason, of course, is the size of the federal budget deficit.)

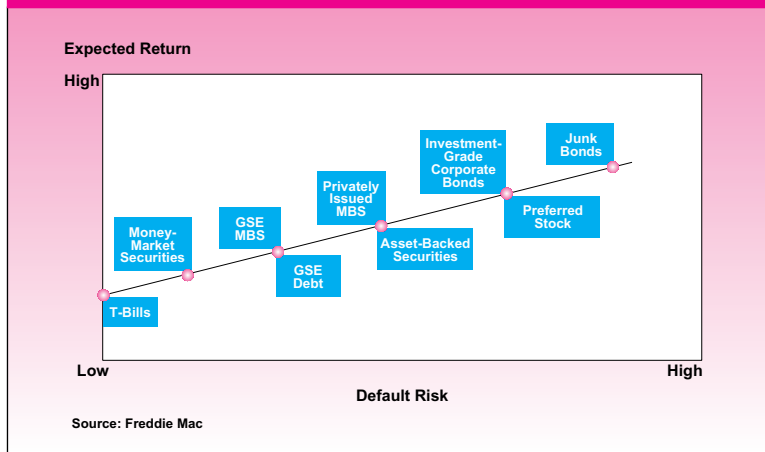
Ten years ago, investors made do with a rather limited diet of bond choices. The main staple, Treasury securities, represented nearly one-third of the U.S. debt market at the end of 1986 (*Exhibit 1*). The alternate selections—corporate bonds, municipal bonds, preferred stocks, government-sponsored enterprise (GSE) debt securities and GSE mortgage-backed securities—made up the remainder of the \$5.2 trillion of total outstanding debt.

At that time, the biggest bond investors focused almost

exclusively on Treasuries, corporates and municipals. Then, as well as now, the risk present in these sectors was well understood and the cash flows were highly predictable. Conversely, investors showed little appetite for mortgage-backed because of the prepayment risk inherent in those bonds. As a result, MBS accounted for only 10 percent of the debt market in 1986.

The terrain changed in 1983 when Freddie Mac introduced the collateralized mortgage obligation (CMO). This innovation combined many individual mortgage-backed securities into a much larger structure and redistributed the aggregate cash flows into discreet classes of securities called tranches, from the French word

EXHIBIT 2: Capital Market Line



Compared with risk-free Treasury securities, all other bond market instruments bear greater risks and therefore should bring higher returns.

for slice. By directing mortgage cash flows into separate tranches, issuers could create debt instruments with different cash flows. By further channeling prepayment risk away from some tranches and toward others, bond designers discovered they could satisfy an even wider range of investor needs. For the first time, individual mortgage-backed securities became fodder for the full range of short-, intermediate- and long-term maturities.

With cash-flow variability under greater control, the same investors who had previously shunned mortgage-backed securities began buying CMOs and, later on, real estate mortgage investment conduits (REMICs). (See “They’re Back! The Rebirth of REMIC Securities,” page 12.) Mortgage-

backed securities, driven by the popularity of REMICs, have since won significant investor enthusiasm and attracted substantial capital to the housing-finance system. MBS grew to 15 percent of the debt market in 1996, which

translates into a compounded annual growth rate of 12 percent over the past 10 years.

Since the mid-1980s, the menu of highly liquid bond types has continued to expand. In particular, the variety of collateral used to form securities backed by assets has ballooned. (Although residential mortgages are indeed assets, the market regards mortgage-backed and asset-backed as two separate types of bonds.)

ABS, which at \$3.3 billion accounted for a thin slice of less than one-tenth of 1 percent of the outstanding debt market in 1986, now claim a 3.5-percent share, with \$398 billion issued in 1996. Despite a phenomenal compounded growth rate of 61 percent annually for the 10-year span, asset-backed debt lags behind outstanding mortgage-backed debt by two-thirds.

What, Me Worry?

On a shorter-term, cyclical basis, the market’s reassessment of the traditional risk/rewards tradeoffs that investors are willing to make also helped usher in the Bowie Bond era.

The more reliable the collateral cash flow, the lower the risk and the resulting interest cost to the borrower. While many different types of property or rights can generate the future cash flows needed to repay an asset-backed, some offer better odds than others that the borrower will repay in full. Generally, lenders prefer to lend against assets with more certain and predictable cash flows. The greater the risk, the higher the return lenders expect.

Bonds issued by the U.S. government are seen almost universally as free from the default risk of nonpayment for several reasons, including long-term stability of the federal government and its authority to raise revenue through taxes. The yield on U.S. Treasuries, then, serves as a benchmark against which the risk and yield of other bonds and debt instruments are measured.

Consequently, nearly all investors would place U.S. Treasuries at the no-risk end of the capital market line, which plots the tradeoff that the market demands between risk and expected return, as depicted in *Exhibit 2*. Less certain, however, is precisely where other

debt securities fall along the risk/reward continuum.

The **credit-risk** assessments done on individual securities by bond rating companies—such as Moody's Investors Service, Standard & Poor's Ratings Services, Duff & Phelps Credit Rating Co. and Fitch Investors Service—provide one good indicator of relative risk. Performed as a service to investors and issuers, the ratings awarded use slightly different nomenclature from rating company to rating company, but the values are roughly equivalent across the board. At Standard & Poor's, for example, ratings start at "AAA," denoting an extremely strong capacity by the debtor to meet its financial commitment on an obligation. The ratings drop from there, ending at "D," indicating that the bond is in default.

Another means of gauging the market's assessment of credit risk is captured in the yield difference between a security and a Treasury security of comparable maturity, which is referred to as the **credit spread**. The safest nongovernment securities exhibit the narrowest credit spreads. Although high-quality securities rated AAA by Standard & Pooors—which include most Freddie Mac mortgage-backed and debt securities—represent extremely low risks of default, they are not completely risk free. Consequently, investors require a

slightly higher yield on AAA securities compared with Treasuries as compensation for the incremental exposure. As of early June, the credit spread between GSE-issued mortgage-backed securities and Treasury securities of comparable 10-year maturities was running around 100 basis points.

Junk bonds occupy the other end of the credit-risk spectrum,



with ratings of BB or lower. The sizable chance of default inherent in these instruments prompts investors to demand a much higher credit spread, with about 350 basis points separating 10-year, BB-rated junk bonds and 10-year Treasuries in early June.

Normally, mortgage-backed and asset-backed might fall into higher-risk categories. However, issuers often build in **credit enhancements** to improve the credit rating of an offering, effectively moving it closer to

the risk-free end of the capital market line. Through a credit enhancement, an issuer can lower the credit risk for most tranches, resulting in a higher credit rating and a higher price tag. In the Bowie Bond issue, for instance, the recording company representing the artist reportedly guaranteed that Bowie's back catalog will generate royalties of at least \$30 million during the deal's 15-year term. That guarantee, of course, is only as good as the recording company's creditworthiness.

Credit spreads are established and constantly re-evaluated by the bond market in the normal process of buying and selling. The price of a particular bond will rise or fall depending on, among other things, the market's view of the likelihood of nonpayment. If the credit risk of the bond is perceived to increase, holders will sell that bond until the price falls and the yield climbs. Only when other investors feel that the yield has risen sufficiently to compensate for the higher perceived risk will the price and yield stabilize.

The strong economic cycle of the past several years has made it easier for Bowie Bonds and other innovative issues to take root. Investors and credit rating agencies—buoyed by consistent economic growth, low inflation and low unemployment—have come to regard the probability of default as remote for more

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The Rebirth of REMIC Securities

During the 28 days in February this year, Freddie Mac issued more REMIC classes than throughout the entire 365 days of 1995. By the end of May, the company had created more REMIC classes than in all of 1996.

Whether measured by number of classes or by dollar volume, real estate mortgage investment conduits (**REMICs**) seem headed for a comeback in 1997 (*Exhibit 1*). What happened?

For starters, the bond market finally stabilized last summer after 18 months of fluctuating but generally rising interest rates. As a result, prepayment volatility dropped significantly. That lured more investors back to the REMIC table, their confidence restored that they again could predict the mortgage cash flows on REMIC **tranches**.

Two economic developments—interest-rate stability and a strong economy—also helped by lowering the market's expectations for defaults and by further whetting investor appetites. The **spread** on default-sensitive issues, such as corporate debt and asset-backed securities, has narrowed to razor-thin levels, forcing investors to look elsewhere for incremental yields. For many, that meant returning to the REMIC market that investors collectively had dropped like a hot potato three years earlier.

Shooting Out of the Gate

To appreciate the road to recovery traveled by the REMIC market requires looking back at its 10-year roller-coaster ride (*Exhibit 2*).

When changes to the 1986 tax code opened the door to REMICs, collateralized mortgage obligations (CMOs) already had taken hold as a way to slice the cash flows from existing mortgage securities into tranches. However, accounting and tax rules treated a CMO as a liability of the issuer, meaning the CMO and

the mortgage collateral backing it had to remain on the issuer's balance sheet. This required a commitment of capital that could otherwise have gone to support the purchase of additional mortgages. A REMIC structure, on the other hand, moved everything off the issuer's balance sheet, thus freeing up capital.

REMICs also benefited from the fact that the raw material needed to build these structures was in plentiful supply. Not only did a large pool of mortgage assets exist at the time, but much of the supply carried the guarantee of the two potentially biggest issuers, Freddie Mac and Fannie Mae.

Five years later, the REMIC market, which stood at just under \$180 billion in 1991, was

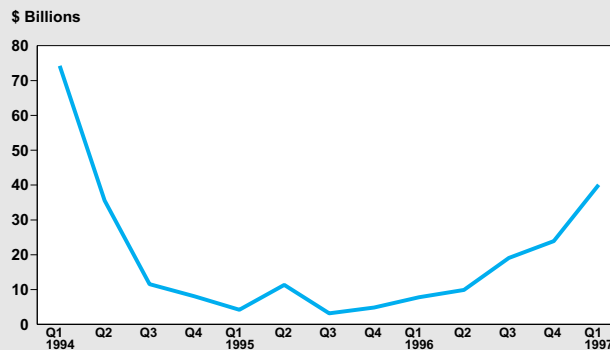
poised to take off. The economy was healthy. Investors, attracted by the liquidity of REMICs, began to put their money to work.

From there, the popularity of REMICs skyrocketed, peaking in 1993. That year, interest rates fell to generational low levels and homeowners staged an unprecedented wave of mortgage refinancings. Freddie Mac and Fannie Mae REMIC issuances likewise hit a record \$320 billion.

A Hair-Raising Descent

In 1994, that widespread euphoria came screeching to a halt. Early in the year, the Federal Reserve moved to rein in an overheating economy through an unparalleled series of interest-rate hikes. Higher interest rates, along with lower prepayment expectations that lengthened maturities, hit the REMIC market like a one-two punch, resulting in near-panic selling by REMIC investors. At the same time, dealers showed increasing reluctance to serve as the sole buyers of whatever the market wanted to sell. By the

EXHIBIT 1: Quarterly GSE REMIC Security Issuance



Sources: Freddie Mac, Fannie Mae

After an initial rapid rise culminating in 1993's record \$320 billion volume, REMIC issues plunged throughout 1994 and 1995 to an anemic \$30 billion. Now, in 1997, the REMIC market is regaining lost ground.

second half of 1994, REMIC issues had plummeted, accounting for only a small portion of the \$140 billion issued that year. By 1995, new REMIC issues had wilted to less than \$30 billion.

During the dismal years of 1994 and 1995, rising interest rates and a dearth of buyers led to widespread losses in the REMIC market. Prices for nearly all REMIC tranches fell sharply. For a while, those investors holding the most interest-rate-sensitive classes—such as inverse floaters, which saw interest income decline as market interest rates rose—considered themselves lucky to find a buyer at any price.

As it turns out, many REMIC investors did not fully understand the sensitivity of their investments to extreme market swings. Others were hurt when dealers retreated from making markets during the selling avalanche.

Some Wall Street dealers withdrew entirely from the REMIC market, turning their attention, instead, to asset-backed securities. The reigning REMIC-underwriting kingpin at the time, Kidder, Peabody and Co., eventually was forced to close its doors.

Mortgage-backed securities took a drubbing in the media, as news accounts kept a running tab on the ever-increasing number of investors who sustained REMIC-related losses. Regulators debated whether REMICs qualified as suitable investments for banks, thrifts, insurance companies and state pension funds.

Investors who were able to stay afloat swore off mortgage-backed securities forever.

Back into the Water

As it turns out, forever is approximately three years long when measured by REMIC market demand.

Today, many investors have jumped back into the water, drawn by an improved risk/reward tradeoff for

REMICs, especially relative to asset-backed securities, corporate bonds and other fixed-income securities.

Ironically, the growth spurt in the asset-backed securities market that came at the expense of REMICs eventually helped resuscitate the REMIC market. First, asset-backed securities maintained investor interest in structured cash flows, a characteristic both types of securities share. Then, the spreads on asset-backed securities tightened considerably, sending investors looking for substitutes.

This time around, though, REMIC investors are not making a move without consulting an array of sophisticated mortgage analytics.

Thus armed, investors use the analytics to dissect the potential performance of REMIC tranches by risk and by price under a variety of

interest-rate scenarios.

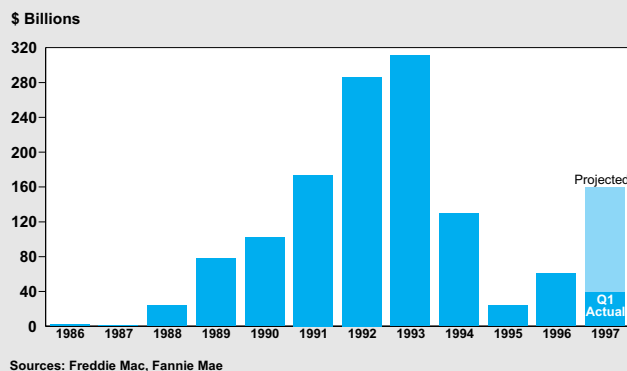
Another factor behind the resurgence of REMICs is, simply, their limited supply. With little new issuance until recently, the paucity of high-quality REMIC tranches for sale, combined with increased investor interest, led Wall Street to begin cranking out a number of new deals in 1996. These new issues, however, are generally less complex, with fewer classes than the pre-1994 issues. That is starting to change this year, though, as a growing array of investor needs is adding intricate details to many REMIC deals.

Is It 1993 All Over Again?

Many of the dynamics that led to the hurly-burly days of three years ago are back: stable interest rates, liquidity, a healthy economy and strong dealer support. If the market can sustain today's 1993-like conditions, then the REMIC recovery has just gotten started.

—David Borsos, director of marketing and new products, structured finance department

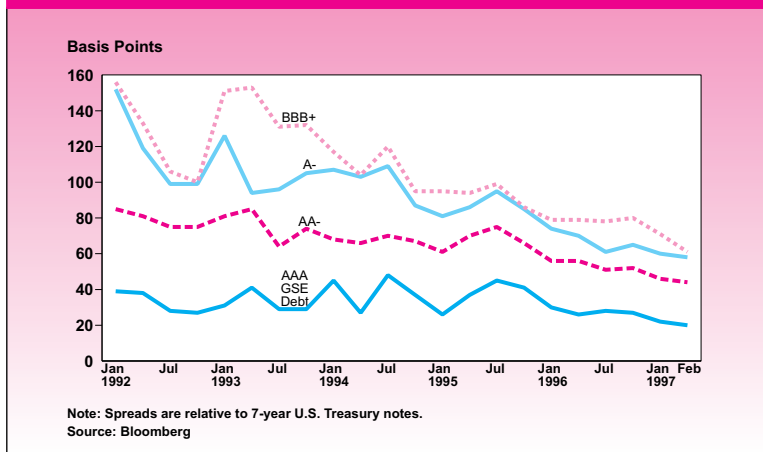
EXHIBIT 2: Annual GSE REMIC Security Issuance



If the dollar volume of REMIC securities issued by the GSEs continues to rise at its current pace, then 1997 issuance will easily surpass total issuance for 1995 and 1996 combined.

Bowie Bond, *continued from page 11*

EXHIBIT 3: Bond Yield Spreads



The healthy bond market of the past seven years has caused yield spreads to shrink among instruments traditionally judged as higher risk.

and more securities. With credit risk seemingly out of the picture, bonds have attracted more investors. The resulting increase in demand has led to a rise in bond prices and a concurrent compression in yield spreads over Treasuries.

Ratcheting Down

Between January 1992 and February 1997, for example, the yield spread between corporate bonds and Treasuries narrowed dramatically as the economy continued to hum along. The yield on AA-rated, seven-year corporate bonds issued by finance companies (*Exhibit 3*) hit 7.2 percent on January 1, 1992, which was 85 basis points above the yield on seven-year Treasury notes. By the end of February 1997, the yield spread between the same securities had dropped to 44 basis points. An even more dramatic example of

yield-spread tightening is found in lower-rated BBB+ finance-company debt. Over the same time span, this yield spread narrowed to 61 basis points from 156 basis points.

Among other things, yield-spread compression can provide an

indicator of investor confidence—as confidence grows, spreads narrow. Investors, eager for higher yields to boost portfolio performance, recently have bought riskier, higher-yielding bonds, apparently shrugging off the higher probability of default. Greater demand for the higher-yielding securities boosted prices and lowered yields simultaneously. Now many investors are beginning to wonder whether they are earning a yield premium commensurate with the greater levels of credit risk they assumed.

One of the major effects of the compounding investor demand for high yield-spread securities was to lower borrowing costs for nearly all credit-market issuers, including Freddie Mac. It also increased the relative attractiveness of the

bond market as a primary source of capital for obscure, niche finance companies. These bit players, which were once limited to obtaining funding privately from banks and insurance companies, found a ready, willing and generally cheaper source of capital in a bond market that was hungry for new issues. Considerations such as an issuer's creditworthiness and performance history became less important than the payment structure of a bond and the credit enhancements accompanying the bond.

In the most popular form of credit enhancement, subordinated tranches are created to assume a disproportionate share of the credit risk of the underlying assets. The presence of subordinated tranches leaves the rest of the classes in the bond issue in a senior position, meaning the remaining tranches are protected, up to a point, from credit risk. Thus, the subordinated tranches function like bodyguards, sacrificing themselves to save the senior tranches by absorbing the default losses from collateral failures.

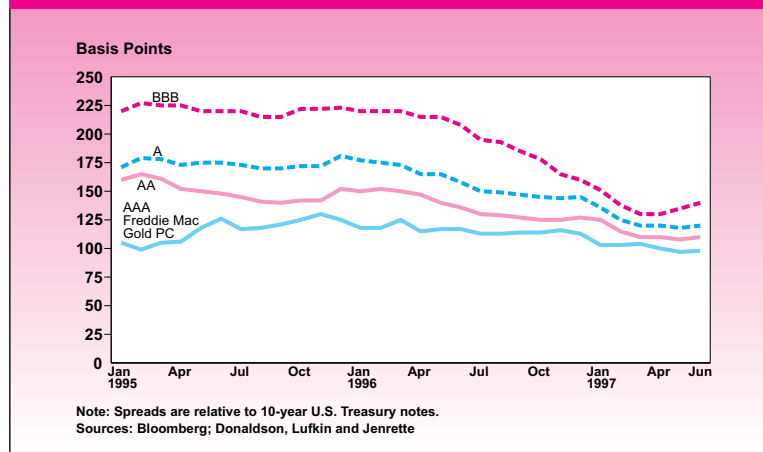
Typically, subordinated tranches are set up sequentially, such that the bodyguard in line to take the first default hit receives the lowest credit rating of perhaps a single B rating, for example, and pays the highest

interest rate. If the first subordination tranche consisted of \$300,000 in principal, then the first \$300,000 of credit losses would wipe out this tranche, leaving the investor holding this tranche with a total loss.

After the first line of defense falls, the next bodyguard steps forward. This tranche bears somewhat less risk, perhaps reflected in a BB or even BBB rating, because it was protected by the first bodyguard for a time. The third and fourth bodyguards might carry A and AA ratings, respectively. With each higher credit rating, the coupon interest and spread over Treasuries drops slightly. The senior tranches do not suffer any default losses until enough mortgage defaults extinguish all the subordinated tranches.

The size of the subordination amount for any particular deal is determined by the credit rating agencies, which dictate the degree of protection a senior tranche needs to secure a AAA rating. This amount depends on many variables, including the type of assets used in the security, the geographic concentration of the assets and the reliability of the issuer and servicer for the pool of assets. The greater the amount of subordination required, the more expensive the credit enhancement is for the issuer, which must pay higher interest rates on the subordinated classes. Bowing to a generally benign

EXHIBIT 4: Mortgage-Security Credit Spreads



Yield spreads between the AAA-rated Freddie Mac Gold PC security and riskier mortgage securities have all but collapsed recently.

default environment, and perhaps to competition among the rating agencies themselves, the mandatory amounts of subordination typically have fallen, lowering the cost of securitization for nearly all issuers.

Soon, the mortgage-backed and asset-backed securities markets—long dominated by large, high-quality issuers—had to make room for a new wave of issuers and their securities. Thus, the established issuers now had to compete for investors' capital with upstart firms peddling securities backed by manufactured-housing loans, equipment leases, home-equity lines of credit, home-improvement loans, student loans and more.

In the capital market for residential-mortgage loans, the field of high-quality issuers—once limited to Freddie Mac,

Fannie Mae and Ginnie Mae—likewise became crowded with new players, namely the private label issuers such as GE Capital Mortgage Services, Norwest Asset Securities Corp. and Residential Funding Corp. The well-structured, credit-enhanced securities issued by the private labels offered investors higher yields than did Freddie Mac mortgage-backed securities, yet were perceived as posing little incremental credit risk. Following a now familiar pattern, investors sought out the higher yields of private label securities, bidding up prices and narrowing the credit spread over securities issued by the GSEs.

As Exhibit 4 shows, yield premiums for credit risk also have collapsed for mortgage securities over the past several years. In early 1995, for example, investors in BBB-rated mortgage securities earned approximately

Value is in the eye of the beholder, and today's investors might view the world quite differently tomorrow.

50 basis points in additional yield compared with investors in A-rated securities. In April 1997, however, the BBB investor received only about 12 basis points more than the A investor for assuming the same amount of additional credit risk as before. The same spread compression occurred between AAA and AA securities and between AA and A issues.

When the Music Stops

The secular changes—including the ability of Wall Street and investors to analyze, understand and model a wide variety of assets and their cash flows—that have helped impose the current credit-compression environment on the bond market are both beneficial and irreversible.

However, unless business cycles are a thing of the past, it is likely that a reversal in the

spread-compression phenomenon lies ahead. At some point, the economy certainly will enter a period of slower economic growth, higher unemployment and higher consumer and business defaults ... and the music will stop. At that juncture, investors may well sell their lower-quality securities and buy securities with greater protection from credit risk. This tendency among investors to periodically take shelter in the highest-quality securities is known as a “flight to quality” and, at least in the past, has signaled a return to more rational levels of credit spreads. When this occurs, the already popular mortgage-backed securities, especially those issued by the GSEs, will enjoy even greater investor demand.

Value is in the eye of the beholder, and today's investors in unconventional securities might view the world quite differently tomorrow. Prudent investors might do well to recall the words of David Bowie himself when he sang, “Every time I thought I'd got it made, it seemed the taste was not so sweet.” **SMM**