Perspectives

Real Estate Investment Principles for Tax-Exempt Institutions
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Exploring Commercial Mortgage-Backed Securities in a Pension Fund Portfolio
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Private equity investment in commercial real estate can be a valuable addition to a tax-exempt institution’s mixed asset portfolio so long as the investor’s objectives reflect the realities of the asset class. Over the past three years, our views on real estate as an asset class, its role in a mixed asset portfolio, and the causes of the real estate recession have been presented via our JMB Perspectives, JMB Update, and JMB Market Comment research series. This body of work has also addressed individual issues which we feel pose distinct challenges in the current investment climate.

Last fall, we made the claim that “commercial real estate is once again properly priced relative to financial assets on a risk-adjusted basis.” Today, we stand by that claim and offer ten “Real Estate Investment Principles” which we believe provide a framework within which tax-exempt investors can evaluate their real estate investment commitment. These principles represent the culmination of our views on how tax-exempt investors should approach commercial equity real estate investment.

**Real Estate Investment Principle #1**

Real estate must provide an attractive risk-adjusted return in a mixed asset context.

In order for real estate to make sense within a mixed asset portfolio, first and foremost, the total expected return generated by the investment must add value on a comparable risk-adjusted total return basis. The primary objective of any asset class must be attractive risk-adjusted returns. Though real estate offers other desirable performance characteristics such as diversification, total return stability, and inflation hedging capabilities, the absence of attractive total returns would outweigh these benefits. A focus on comparable risk-adjusted total return requires that real estate be valued (priced) within a mixed-asset capital market context, which leads to our next principle.

**Real Estate Investment Principle #2**

Real estate’s appropriate risk-adjusted return should be measured relative to a capital market benchmark.

The best way to place real estate within a mixed asset context is to link its relative performance to an easily recognized and understood capital market benchmark. This wasn’t done during the 1980s as the pricing for commercial real estate became delinked from that for financial assets. Real estate pricing decisions were made in a capital market vacuum. This created problems that were compounded by the industry’s failure to recognize that markets were becoming saturated with new real estate product. The demand of capital for investment real estate prompted construction of new supply at a rate that exceeded user demand. As has been clearly demonstrated, when real estate’s space market, i.e., supply and demand, becomes delinked from the capital markets, i.e., capital market pricing, investment risk is greatly increased. Linking real estate’s return requirements to

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the capital markets imposes discipline on real estate investors and ensures that any investment is examined within the context of other investment alternatives.

We believe that the most appropriate benchmark for comparison of equity real estate investment total returns is the U.S. Treasury market. The fixed-income segment of the capital market trades in an auction market which prices investment claims over a wide range of maturities. Assuming an average hold for commercial real estate of ten years, we recommend the ten-year Treasury as the appropriate asset class for comparison.

**Real Estate Investment Principle #3**

EQUITY REAL ESTATE’S APPROPRIATE MINIMUM UNLEVERAGED TOTAL PORTFOLIO RETURN SHOULD BE 200 TO 400 BASIS POINTS ABOVE COMPARABLE U.S. TREASURIES, NET OF INVESTMENT MANAGEMENT FEES.

This position was developed from the perspective of determining the minimum necessary total return real estate must generate in order to justify a 5% to 10% allocation within a mixed asset portfolio. The 200 basis point spread represents the minimum premium private market equity real estate must earn to compensate pension investors on a risk-adjusted basis. Implicit in this view is the assumption that small allocations to any asset class, certainly anything less than 5%, have little impact on portfolio-level returns and should be avoided in cases where the asset class is relatively management intensive, as in private market real estate.

When the 200 to 400 basis point minimum return cannot be achieved, asset acquisition activity should slow and consideration be given to moving the portfolio to the lower range of the asset allocation target. The converse is also true. When the total return minimum can be met or exceeded, acquisitions should increase and the portfolio weight should move toward the upper range of the asset allocation.

**Real Estate Investment Principle #4**

PROPER DIVERSIFICATION WITHIN A REAL ESTATE PORTFOLIO IS THE SINGLE MOST IMPORTANT RISK MANAGEMENT TOOL AVAILABLE TO THE TAX-EXEMPT INVESTOR AT THE PORTFOLIO LEVEL.

"Institutional investors have long employed portfolio strategies to set targeted risk and return parameters for their financial asset investments. Financial theory suggests, and financial investment managers have learned, that strategies established at the portfolio level have more impact on portfolio performance than does the skill with which individual securities are selected." While financial asset diversification strategies have been used for over two decades, real estate portfolio diversification is a relatively new concept introduced in the late 1980s and early 1990s. We pioneered the creation of real estate portfolio strategies and currently apply a well-developed portfolio construction methodology on

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behalf of our institutional investors. Subject to Principle #1, attaining an attractive risk-adjusted total return, portfolio diversification strategies represent the most powerful risk management tool available at the real estate portfolio level.

**Real Estate Investment Principle #5**

PRIVATE MARKET REAL ESTATE’S LIQUIDITY IS LIMITED AND IS DETERMINED WITHIN THE FRAMEWORK OF THE OVERALL CAPITAL MARKETS.

Investment structure can limit liquidity, as in a closed-end fund, or allow it, as in an open-end fund, but it cannot create liquidity. Real estate—the underlying asset—is itself illiquid. Trades occur only after an “appropriate” time on the market, with the length of time determined by the interaction of pricing and demand. When the capital markets find real estate an attractive investment alternative, closed-end shares are likely to trade and queues in open-end funds will remain low. The opposite is also true. When investors shun real estate, queues grow and secondary market trades disappear. Private real estate equity investments should be viewed as long-term commitments; they cannot be relied upon as a source of plan asset liquidity.

**Real Estate Investment Principle #6**

ALTHOUGH REAL ESTATE’S INVESTMENT HORIZON IS A LONG-TERM ONE, EACH ASSET SHOULD BE REVIEWED ON AN ANNUAL BASIS TO DETERMINE IF RETAINING THE ASSET CONTINUES TO MAKE INVESTMENT SENSE.

An annual hold/sell analysis is an essential part of a disciplined portfolio management process. The purpose of this analysis is to examine whether the future returns are attractive enough, compared to capital market pricing, to justify remaining invested in the asset, given its role in a portfolio context. This asset review should proceed from the same perspective as the acquisition process. Factors considered include the asset’s expected return compared to its current carrying value. The capital market benchmark presented in Principle #3 should be reapplied. When the 200 to 400 basis point premium cannot be achieved, the hold/sell analysis recommends a sale.

**Real Estate Investment Principle #7**

REAL ESTATE INVESTMENT WILL PROVIDE THE PERFORMANCE CHARACTERISTICS OF AN INFLATION HEDGE WHEN FUNDAMENTAL MARKET CONDITIONS APPROACH LONG-RUN SUPPLY/DEMAND EQUILIBRIUM.

Tax-exempt investors are most concerned about hedging against inflation over the long-run. (Hedging quarterly or annual inflation is less relevant than beating long-term inflation trends.) Real estate’s ability to provide an inflation hedge depends primarily on the dynamics at work within the space market. Our research suggests that when market

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vacancy rates are high compared to historical standards, as in the office market now, real
estate will not provide a long-term inflation hedge.7 However, empirical analysis strongly
suggests that real estate offers inflation hedging characteristics when market vacancy
rates are low, as demonstrated by the current warehouse and apartment results.

TAX-EXEMPT INSTITUTIONS SHOULD DEVELOP AN EXPLICIT PORT-
FOLIO-LEVEL STRATEGY CONCERNING THE USE OF LEVERAGE
WITHIN A REAL ESTATE PORTFOLIO.

In general, the leverage decision should be made at the mixed-asset level, not at the sub-
portfolio level, i.e., not at the real estate portfolio level. The reasons for this are clear. A
mixed asset tax-exempt investor will likely maintain a relatively high fixed-income invest-
ment position. For example, most tax-exempt investors maintain a U.S. Treasury fixed-
income subportfolio. This means that the investor is essentially "lending" to the U.S.
government at comparatively low interest rates. If the same investor borrowed against
their real estate portfolio via the private-placement whole loan market, their borrowing
costs would easily exceed comparable U.S. Treasury rates, usually by 180 to 200 basis
points. This would mean that the tax-exempt fund would be lending at, say 8% and bor-
rowing at a higher rate, say 9% +. Obviously, lending at 8% and borrowing at 9% makes
little intuitive or economic sense. Having made that point, however, there are instances
where leverage makes sense within a tax-exempt real estate portfolio. This is the case
when a property can be purchased subject to favorable existing debt. If property is held
within a structure which prohibits or restricts the raising of new equity capital, e.g.,
closed-end funds and private partnerships, debt financing may be the best way to finance
necessary expenses such as capital improvements and tenant finish. It may be appropri-
ate to use leverage as a means to achieve diversification targets within the real estate sub-
portfolio. For example, placing leverage on existing, high quality assets and redeploying
the proceeds may improve the portfolio’s risk-adjusted return. Finally, the debt markets
may become attractive when financing or refinancing rates are significantly below tradi-
tional Treasury yield spreads. In these cases, the judicious use of positive operating lever-
age (when the annual mortgage constant is lower than the overall equity capitalization
rate) may indeed be appropriate. The key is to avoid circumstances where the achieve-
ment of positive leverage is dependent upon significant rental growth assumptions.

NEW REAL ESTATE INVESTMENT STRUCTURES DESIGNED FOR
TAX-EXEMPT INVESTORS NEED TO DO A BETTER JOB OF ALIGNING
INVESTOR AND MANAGER INTERESTS.

Specific issues which should be addressed when new structures are developed include:
legal structure, governance, investment selection, fund structure, management compensa-
tion, performance reporting, transferability, and liquidity.8 These issues currently rep-

7 See Charles H. Wurtelebch, "Commercial Real Estate as a Portfolio Inflation Hedge,"
JMB Perspectives Volume 3 (Fall 1993): 2-4.

8 See Jerome J. Claeyes, III and William L. Ramseyer, "Structuring Pools for Real Estate
resent the key "hot" buttons of pension boards and staff members alike. Going forward, private REIT structures may offer the best combination of characteristics to bring together investor and manager interests.

PUBLICLY-TRADED REAL ESTATE EQUITY SECURITIES, PRINCIPALLY REITS, CAN PLAY AN IMPORTANT ROLE IN THE PORTFOLIOS OF A WIDE RANGE OF TAX-EXEMPT INVESTORS.

While the total market capitalization of equity REITs is currently only $30 billion, we believe that the rapid recent growth will continue and that REITs will become a permanent part of the real estate capital markets. For some smaller tax-exempt investors (under $500 million in total assets), the public REIT market may represent the best way for them to participate in the real estate capital market on the equity side. For moderate-sized ($500 million to $1 billion) and large ($1 billion+) tax-exempt investors, a combined public REIT and private market investment portfolio may make the most sense. We believe that progressive tax-exempt investors will be holding 25 to 33% of their real estate allocations in public REITs within ten years.\(^9\) For many investors, the public portion of their real estate portfolios will provide both the tactical balancing capability lacking in the current private market and the opportunity to access the liquidity of the public markets.

Exploring Commercial Mortgage-Backed Securities in a Pension Fund Portfolio

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Pension funds seeking investment alternatives to enhance the performance of their fixed income portfolios have recently expressed increased interest in commercial mortgage investments. Their interest is well founded. Of the investment options available within the commercial mortgage universe, commercial mortgage-backed securities (CMBS) currently can offer plan sponsors superior risk-adjusted performance, increased diversification, and enhanced liquidity relative to commercial mortgage whole loans, as well as many alternative fixed income investments. This paper provides an introduction to the emerging CMBS market and offers pension investors a framework for evaluating CMBS as a component of their fixed income portfolio.

**THE COMMERCIAL MORTGAGE MARKET** The domestic commercial mortgage investment market primarily consists of fixed income loans backed by private equity real estate assets. The total amount of commercial (multifamily and nonresidential) mortgages outstanding as of June 1994 was approximately $1 trillion (Figure 1). Historically, the commercial mortgage market has been dominated by life insurance companies, thrift institutions, and commercial banks with pension funds playing a relatively small role to date (Figure 2, next page). Under traditional lending patterns, lenders made direct loans using internal staff to evaluate credit quality or purchased loans from correspondents according to terms specified by the lenders. These lenders typically held loans in their portfolios until prepayment, default or maturity.

The mortgage market grew rapidly in the 1980s as lenders rushed to meet the expanding financing needs of investors and developers. The Economic Recovery and Tax Act (ERTA) of 1981 stimulated demand for mortgage loan investments by limited partnerships and other investors seeking real estate-related tax benefits. At the same time, deregulation allowed banks and thrift institutions to expand their activities in the commercial mortgage market. Finally, insurance companies experienced significant increases in investable funds arising from increased premium income and the sale of long-term Guaranteed Investment Contracts (GICs) to pension funds. Life insurance companies invested in long duration assets such as commercial mortgages to fund their GIC liabilities, hoping to create a positive spread position.

As competition increased among lenders seeking to become more fully invested in the commercial mortgage market, underwriting standards loosened and required rates of return decreased. The volume of commercial mortgages outstanding nearly tripled, rising from $400 billion in 1981 to $1.1 trillion ten years later. With the glut of available debt financing, pension funds began to consider the investment opportunity in CMBS.

**FIGURE 1**

Commercial Debt Outstanding 1980-1994 (2nd Quarter)

Source: Federal Reserve Bulletin
even marginal borrowers could find non-recourse loans at attractive rates requiring little equity. Further, the standard type of mortgage was the “bullet” loan, which scheduled interest-only payments over the loan term, with the full principal amount due at maturity. As more of these marginal borrowers obtained funding under these favorable terms and as underwriting discipline declined, properties were brought to the market that made little economic sense. When it became obvious that borrowers would be unable to make debt service payments, even on the interest-only basis that became the standard in the mid-to-late 1980s, lenders began to restructure loans and, in many cases, began the process of foreclosure.

At the same time that this oversupply of financing was occurring, the first wave of commercial mortgage securitization began. Starting in 1984 with a $1 billion securitized financing of three office properties in New York, investment banking houses were anxious to securitize pools of commercial mortgages held in the portfolios of traditional lenders. However, the lenders were largely uninterested as they chose to hold these investments for enhanced yield and not seek the liquidity that is a primary benefit of securitization. Nor did borrowers rush to this market directly for capital because of the ready availability of cheap financing from the traditional lenders. Despite these disincentives, 3% of the commercial mortgages outstanding in 1988 had been securitized, primarily in multifamily assets. One important outcome of this first wave of securitization was the development by the rating agencies of an evaluation system for commercial mortgages. This system forms the framework for the agencies’ risk assessments in the current market.

The number of weak loans to weak borrowers increased throughout the 1980s and, as institutional investors increased their allocation to equity real estate, markets for all property types in most regions of the country became overbuilt. With lower than expected tenant demand and declining rents, borrowers were unable to meet debt service and defaulted in...
large numbers (Figure 3). Further impetus for loan defaults came from changes to the U.S. tax code. The Tax Reform Act of 1986 took away most of the tax benefits related to real estate investment, reducing the incentive of borrowers to continue to own real estate.

As borrowers defaulted, lending institutions foreclosed on the loans. In the process they became involuntary equity owners of real property. As a result, large amounts of property were transferred from borrower to lender, with the responsibility of asset management shifting as well. Real estate markets continued their decline, negatively affecting the value of financial institution portfolios (Figure 4). The problem of non-performing assets was particularly acute for life insurance companies. They had expected income from commercial mortgages to match and cover the cash flow requirements of their GIC liabilities.

Many of the thrifts and commercial banks that over-committed to the real estate equity and debt markets eventually failed. The creation of the Resolution Trust Company (RTC) provided a vehicle by which the assets of these failed financial institutions could be sold, often through securitization. By the end of 1993, the RTC had sold or securitized over $20 billion of real estate assets. The RTC securitization strategy focused mostly on producing investment grade CMBS, thereby converting an otherwise illiquid asset class to a form universally accepted by traditional fixed income investors. The RTC’s program attracted significant traditional fixed income investor participation, in the process reigniting the CMBS market.

The problems experienced by life insurance companies and depository institutions in the late 1980s led regulators to impose more restrictive risk-based capital requirements for commercial mortgages, increasing the cost of holding such assets. This created an incentive for traditional lenders to seek ways to liquidate large portions of their commercial mortgage portfolios. It also provided a disin-
centive for them to originate and hold new mortgage investments. Given the market acceptance of RTC issues, lenders have identified securitization as a vehicle to generate the liquidity they need. Their move to securitize is helping to feed the increasing investor appetite for CMBS just when the RTC pipeline is dwindling (Figure 5).

Estimates of the amount of commercial mortgages maturing over the next five years range from $300 to $500 billion. While traditional one-off private lending relationships will fund a portion of this, the securitization market for commercial mortgages is sufficiently developed such that a significant portion of these refinancings will become securities sold and traded in the capital markets. We expect CMBS volume to match or exceed the current level of approximately $20 billion annually, resulting in total market capitalization of at least $160 billion by 1999 (Figure 6).

Traditional lenders have reentered the marketplace, reacting both to yield pressure and to improving property fundamentals. While some lenders look to hold mortgages in their own portfolios, more stringent capital requirements related to whole loans provide incentive to originate securitization. Lenders can book origination and servicing fee income but not hold the mortgages as less efficient working assets on their books. This will improve the likelihood of a growing CMBS market.

By nearly all accounts, the equity real estate which serves as collateral for commercial mortgages has effectively been repriced. The real estate equity benchmark, the Russell-NCREIF Index, experienced a 50% decline from peak values recorded in the late 1980s. The outlook going forward is for increasing returns and a general appreciation in

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**Figure 5**
CMBS Issuance

<table>
<thead>
<tr>
<th>Year</th>
<th>RTC</th>
<th>Private Issues Surpass RTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td></td>
<td></td>
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<tr>
<td>1991</td>
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<tr>
<td>1994E</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 6**
CMBS Potential Market Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>CMBS Market</th>
<th>Investment-Grade CMBS</th>
<th>High Yield CMBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>$80 Billion</td>
<td>$40 Billion</td>
<td>$0</td>
</tr>
<tr>
<td>1997</td>
<td>$120 Billion</td>
<td>$60 Billion</td>
<td>$20</td>
</tr>
<tr>
<td>1999</td>
<td>$160 Billion</td>
<td>$80 Billion</td>
<td>$40</td>
</tr>
</tbody>
</table>
values, which have, in fact, already begun a subtle upswing. Given that today's commercial mortgage underwriting standards are much more conservative and are based on readjusted values, it follows that as the collateral for commercial mortgages increases in value, loan-to-value ratios, and hence credit quality of the underlying mortgages will also increase. These fundamentals make commercial mortgage investing particularly attractive today. There is an important caveat: due to the relative heterogeneity of asset performance by region and property type, not all sectors in all markets will experience increasing values. Certain sectors could continue to decline. Therefore, targeted investment is essential to attaining attractive returns.

Indicative of the general trend of increasing credit quality in the commercial real estate market is a declining number of commercial mortgage delinquencies and defaults. This trend is expected to continue so long as lenders maintain rigorous underwriting standards for newly originated loans. In some senses, the current experience resembles that of the late 1970s, when the real estate market began a recovery from a tumultuous downturn. Loans made in 1976 and 1977 experienced the lowest levels of default of any period since then (Figure 7). As more funds flow into the commercial mortgage market, however, underwriting discipline could decline if deal flow once again becomes more important than deal quality. CMBS provide a hedge against this risk. Since loans pooled for CMBS must adhere to strict rating agency underwriting criteria, underwriting discipline will continue to be an important component of the CMBS market.

Two primary ways exist to gain exposure to the commercial mortgage investment universe: through the direct extension of credit to borrowers via origination of whole loans or through the purchase or creation of CMBS in the capital market.

**COMMERCIAL MORTGAGE WHOLE LOANS** Commercial mortgage whole loans are simply loans collateralized by income producing real estate, including multi-family, retail, office and industrial property. Such mortgages typically extend credit for terms ranging from five to ten years and are generally priced at fixed rates based on spreads.

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over Treasuries of comparable maturity. Payments are derived from collection of rental payments from third party tenants.

**CMBS** CMBS are securities backed by commercial mortgage whole loans which, in turn, are secured by income producing real estate assets. They may be rated or unrated. CMBS are created by pooling commercial mortgage loans in a trust that issues various classes of securities. The trust collects principal and interest payments from the borrowers, passing through principal and interest payments to the security holders in a specified order of priority. The performance of CMBS is directly affected by the performance of the real estate assets underlying a specific CMBS issue because the quality of these assets helps to determine the likelihood of borrower payment according to the original contractual terms of the whole loans.

Figure 8 shows the process of commercial mortgage securitization and the role that CMBS play in financing income producing property. We illustrate this using a portfolio of assets comprised of the major property types typically held in institutional equity real estate portfolios. We assume that mortgages exist for these assets or that new loans are made on these properties with the outstanding loans representing 75% of the value of the portfolio. When securitization is undertaken, the cash flow from these mortgages is segmented and dedicated to investment grade securities representing approximately 70% of the original mortgage amount and high-yield securities representing approximately 30% of the original mortgage amount.

Securities are created at all levels of risk and return. Risk is quantified by ratings assigned to the securities by the rating agencies: Standard and Poor’s, Moody’s, Fitch or Duff & Phelps.

Commercial mortgage whole loans have traditionally been priced by investors to reflect the average real estate asset risk of all of the cash flows. Pricing within the CMBS market, however, recognizes that the first dollar of cash flow received from a portfolio of commercial mortgages is exposed to less real estate asset risk than the last dollar of cash flow received. The ability to segment commercial mortgage payments by risk through senior/subordinate structuring produces two distinct investment sectors within the CMBS market:

- **Investment Grade CMBS** These rated securities receive priority cash flows from the pool of mortgages collateralizing a CMBS issuance and therefore are priced to reflect their more limited exposure to real estate asset risk. While the corporate bond market considers securities with ratings of AAA - BBB as investment grade, we believe that true investment grade risk in CMBS is reflected in exposure only in the AAA - AA securities.
Because CMBS are primarily backed by private real estate assets with limited publicly-available information, exposure to asset risk can begin at the single A level of securities. Investment grade CMBS typically represent approximately 70-75% of a securitized transaction. Given that a CMBS issue is typically backed by a portfolio of loans that average 75% LTV, the investment grade CMBS essentially earn cash flows from the equivalent of a 52.5% (.70 * .75) LTV portfolio. The risk for an investment grade CMBS investor arises when cash flow earned by the real property which serves as collateral for the underlying mortgages is less than the contractual payment required to the investment grade CMBS investor. Under historical default scenarios, the likelihood that investment grade CMBS investors (those at the 52.5% LTV level) will not receive their contractual payments is small. Therefore, yields earned reflect the strong probability that borrowers will continue to make their mortgage payments and that full payment will be made to investment grade CMBS investors in all but the most serious of real estate recessions. While investment grade CMBS yield spreads over Treasuries are narrower than the spreads of the underlying commercial mortgage whole loans because of their lower risk, these securities offer superior risk-adjusted performance to other similarly rated investments (such as corporate bonds) in a traditional fixed income portfolio.

- **Non-Investment Grade ("High-Yield") CMBS** High-yield CMBS typically comprise 25-30% of a securitized transaction or the top 17.5% of an average 75% LTV portfolio. The cash flows available to these securities are subordinated to the cash flows paid to the holders of the investment grade CMBS. If payments made by borrowers to the trust are sufficient to service the debt represented by the underlying pool of mortgages, both investment grade and high-yield CMBS investors receive full payment. If, however, these cash flows are not large enough to make the required contractual debt service payments on the pool of whole loans because of delinquency or default, high-yield CMBS investors typically receive principal and interest payments only to the extent that there are cash flows left over after required payments are made to the investment grade investors. In this sense, there is a residual nature to the cash flows received by the high-yield CMBS investors.

The high-yield CMBS sector, therefore, reflects most, if not all, of the risk arising from the potential shortfall of borrower debt service payments. Consequently, they typically receive either lower investment grade (A-BBB) or non-investment grade (BB-B) ratings, and often are excluded from the rating process altogether. Enhanced yields compensate high-yield CMBS investors for their additional risk. Currently, these securities offer superior performance to commercial mortgage whole loans on a risk-adjusted basis and can be used to significantly enhance overall domestic fixed income portfolio yield and diversification. For example, it is possible to structure high-yield securities such that after-default yields are greater than those earned by perfectly performing whole loans even when default experience exceeds historical levels. However, both real estate and capital markets expertise are essential for effectively assessing high-yield CMBS risk and capturing the sector’s performance benefits.

*Investment Characteristics*

Each sector of the commercial mortgage market has distinct investment characteristics that combine to fit specific portfolio objectives. Because the commercial mortgage investment market is often considered a component of the domestic fixed income universe, its characteristics are often compared with those offered by other fixed income investments, most notably corporate bonds.
YIELDS Most fixed income investments, including commercial mortgages and CMBS, are priced at a spread over Treasuries of comparable maturities, with the spread reflecting a premium to compensate for some level of perceived risk and illiquidity. Today’s whole loans, as well as the CMBS generated from securitizing them, are typically in the five-to ten-year maturity range, comparable to intermediate term corporate bonds.

Whole loans offer a significant pricing advantage over corporate bonds. A commercial mortgage portfolio with average default risk (measured in terms of historical annual losses) is generally thought to have a similar risk profile to BBB corporate bonds. Yet, for the period 1983 through mid-1993, commercial mortgages averaged 180 basis points (bp) over Treasuries while their corporate counterparts were priced 60 basis points lower, according to a Barron’s/John B. Levy + Co. National Mortgage survey. This yield premium relates to the private market nature of one-off loan transactions and reflects their reduced liquidity relative to corporate bonds. Pricing of whole loan transactions over the past year eased somewhat from the 200-300 bp spreads over Treasuries typically seen in 1993 as more lenders choose to participate in the market. Nonetheless, many whole loan transactions are still priced at close to 200 bp+ over the curve, reflecting the current transition in the capital markets as well as the continued value in whole loan investing.

CMBS pricing conveys the varying asset risk associated with each rating level. A comparison with corporate bonds (Figure 9, next page) shows significant pricing differentials at all rating levels, most notably at the lower end of the rating spectrum where there is less liquidity. As compared to whole loans, higher investment grade rated CMBS (AAA-AA) generally offer lower yields because of greater liquidity and reduced asset risk. However, this trend is reversed as credit quality declines. Because of their reduced liquidity and greater exposure to asset risk, high-yield CMBS offer significant premiums over comparable whole loans.

CALL PROTECTION Corporate bonds typically contain little call protection. By contrast, prepayment risk in commercial mortgages is mitigated by loan documents which typically contain substantial penalties for prepayment after negotiated lock-out periods. The goal is to protect the expected return to the investor or to maintain the investor’s original yield if a prepayment occurs. For CMBS, such protections are required by the rating agencies and not subject to negotiation like in the whole loan market. This shields investors from prepayment and other uncertainties related to the timing of cash flows. Here, CMBS differ from residential MBS, whose greatest risk relates to prepayment.

SECURITY Unlike corporate bonds, which are general, unsecured obligations of a corporation, mortgage loans are secured by real property and the associated income stream, which generally provide the sole means of repayment to the lender. Many CMBS issues benefit additionally from advancing, a mechanism within a securitization that provides continuing bond payments to the investor by a well-rated loan servicer, even in mortgage loan default situations.

CONTROL Corporate bonds do not generally allow investor participation in business decisions. Mortgage lenders, on the other hand, benefit from documentation and covenants
that offer some operational control over the borrower and the underlying real estate (e.g., prohibitions on secondary financing and approval rights over leasing). These benefits accrue to the holders of CMBS as well, exercised through a lender representative in the transaction.

**LIQUIDITY** The corporate bond market has become almost completely liquid as a result of the rating process and the ongoing availability of information in this predominantly public arena. Investment grade CMBS benefit from the same rating process, having been evaluated and rated virtually identically to other bond equivalent investments. While the CMBS market has yet to completely mature, largely due to the limited availability of information in the private real estate market, liquidity in the investment grade sector is approaching corporate bond market experience.

Whole loans and high-yield CMBS experience lesser degrees of liquidity. Both suffer from limited availability of information required to understand real estate asset risk, while whole loans suffer additionally from the absence of a forum for secondary trading. Liquidity will likely improve first for high-yield CMBS as investors get more comfortable with the mortgage loan rating and securitization process and as the market grows.

**DIVERSIFICATION** The greatest diversification benefits to a fixed income portfolio from investing in the commercial mortgage market are available through investment in CMBS. Holders of CMBS own fractional, undivided interests in a large number of loans representing many different properties, industries, locations, and borrowers, thereby greatly reducing property-specific risk and the impact of any single default. Through CMBS, broad commercial mortgage exposure can be gained with a much smaller initial allocation than would be required for whole loan investment. For example, a $50 million allocation to whole loans could represent exposure to between five and ten properties, depending on individual loan size. The same $50 million high-yield CMBS allocation could represent investment in $150 to $200 million of whole loans, or between 15 and 40 properties, depending on individual loan size.

**FIGURE 9**
Spread Comparison between Corporate Bonds and CMBS

![Spread Comparison](image)

Source: Lehman Brothers, November 1994.
Figure 10 summarizes the relative investment characteristics of corporate bonds versus whole loans and CMBS (both investment grade and high-yield).

Equity real estate asset risk associated with high-yield CMBS investment can be effectively evaluated and managed through:

1) a disciplined investment process involving broadly applied market research combined with equity-style underwriting and portfolio construction.

2) prudent securitization design to ensure appropriate senior/subordinate structure and to control the overall amount of leverage (i.e., investment grade) in the transaction.

3) continual monitoring of underlying real estate assets and control of problem situations.

Access to equity-style underwriting capabilities and a network of resources to evaluate real estate fundamentals underlying each loan is paramount to successful high-yield CMBS investing. Consistent and conservative underwriting at the individual mortgage level ensures that asset risk resulting from defaults and foreclosures remains at acceptable levels. Conservative debt-coverage ratios (typically around 1.25) and loan-to-value ratios (targeted at 75%) based on realistic calculations for net operating income and property value provide assurance that the default (put) option implicitly owned by the borrower has little value.

In addition, in order to manage loan portfolio risk, diversification strategies must be developed to protect the investor from concentrations in specific property types or economic locations. A carefully structured loan portfolio diversified by property type and economic location reduces the likelihood that a significant downturn in particular sectors of the economy or a specific property type will have a large impact on the mortgage pool. For a CMBS portfolio, this assures that CMBS asset risk resulting from a concentration of mortgage defaults in a specific area is minimized.

Structuring of the securitization can affect the level of risk in a high-yield CMBS investment. Issuers have historically focused on maximizing proceeds from the issuance of securities, most easily accomplished by creating and selling greater amounts of investment grade CMBS. This process, of course, increases the amount of senior payment obligations with priority over the high-yield CMBS and raises the overall risk of the secu-

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2 A recent article by Corcoran and Kao (Fall 1994) demonstrates the importance of economic diversification for commercial mortgage portfolios. They show that, even when using the na"{i}ve economic regions developed by Hartzell, Shulman and Wurtzebach (1987), economic location plays a key role in predicting mortgage defaults. Therefore, they conclude that portfolios that are efficiently diversified across economic regions provide more attractive risk adjusted performance.
ritized transaction. Even with a conservatively underwritten loan portfolio, aggressive securitization structuring can leave a high-yield CMBS investment with high levels of risk. Effort should be made by advisors and investors to understand and control the structuring process to design high-yield CMBS that meet a plan sponsor’s specific objectives.

Once a pool has been assembled, real estate fundamentals in the underlying markets where the real estate assets are located must be monitored on a continuous basis. This information becomes critical in anticipating potential problems in the portfolio. Early intervention prior to a default situation should minimize the risk to CMBS investors of a decline in cash flows.

Asset Allocation

While asset allocation is the single most important decision affecting fund performance, the majority of plan sponsors and their consultants have been slow to respond to the emerging CMBS market, in spite of the market’s spreads, relative value and long-term growth potential. We believe that pension funds, who are establishing commercial mortgage allocations and who are once again seeking to invest existing equity real estate allocations as markets improve, should give greater consideration to the role CMBS can play in meeting their overall portfolio objectives.

The commercial mortgage investment market is a significant component of the domestic fixed income investment universe of approximately $12 trillion. With a total market value of approximately $1 trillion, the commercial mortgage market represents 8% of the domestic fixed income universe (Figure 11, next page). Using a qualitative approach, a pension fund looking to index its portfolio to the investable universe can establish a strategic allocation of 5-10% of total fixed income assets to commercial mortgage investments and create a consistent weighting relative to the size of the commercial mortgage market. As discussed earlier, the two primary ways plan sponsors can gain exposure to the commercial mortgage universe are through investments in commercial mortgage whole loans or CMBS (both investment grade and/or high-yield sectors).

A unique benefit provided by the CMBS market because of the enhanced liquidity (particularly on the investment grade side) is the ability to tactically alter portfolio holdings of investment grade and high-yield CMBS to respond to a pension fund’s specific liquidity needs, risk tolerance and confidence in the underlying real estate markets (Figure 12, next page). This advantage provides a prudent process for a plan sponsor to effectively increase or decrease their exposure to real estate asset risk in search of superior risk-adjusted returns, and should be overlaid upon the fund’s overall equity real estate and whole loan allocations.

Conclusion

Securitization of commercial mortgages is here to stay. It will play a large and increasing role in supplying debt capital to the equity real estate markets going forward. As a result, pension funds can anticipate a growing supply of investment opportunities in the CMBS sector of the commercial mortgage investment universe. We believe pension investors would be well served to explore seriously such opportunities in the context of their overall portfolio objectives.

One of the attractive features of CMBS is that the senior/subordinate structures allow pension investors to choose the type and level of risk they wish to incur, in effect moving along the risk spectrum from fixed income credit risk to real estate equity asset
risk. Investment-grade CMBS can serve to enhance performance and diversify a traditional fixed income portfolio, while high yield CMBS can serve to enhance performance and diversify a traditional commercial mortgage whole loan portfolio.

We believe that the best values in the commercial mortgage investment market currently exist in high-yield CMBS created from newly originated loans. The key to successful investing is to establish a disciplined portfolio construction process and target securities backed by pools of conservatively underwritten first mortgages on properties in improving markets. Risk is therefore reduced because the probability of losses from delinquencies or defaults is diminished. Current pricing of quality high-yield CMBS does not reflect either the conservative nature of the underlying loans nor the reduced default/delinquency risk. Instead, pricing for high-yield CMBS in general is set to attract capital to a relatively new and inefficient market. As a result, yields are higher than they are likely to be once the sector becomes more established. We urge pension plans to take advantage of the current opportunities within the high-yield CMBS market either through their commercial mortgage or equity real estate allocations.