

Real Estate Derivative: What it is, How it Works, Benefits

By [Robert Stammers](#)

[Full Bio](#)

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What Is a Real Estate Derivative?

Real estate derivatives, sometimes referred to as property derivatives, are instruments that allow investors to gain exposure to the real estate asset class without having to actually own buildings. Instead, they replace the real property with the performance of a real estate return index. In this way, investors can invest in real estate equity or debt without ever buying an actual asset or using real estate as [collateral](#).

Key Takeaways

- Real estate derivatives allow investors to gain exposure to the real estate market without actually owning real estate assets.
- These derivatives track the return of a real estate return index such as the NPI or NAREIT.
- Investors can also often trade derivatives on individual REITs listed on exchanges.

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Benefits of Real Estate Derivatives

Real estate derivatives allow an investor to reduce their upfront [capital](#) commitment and to shelter real estate portfolios on the downside while providing for alternative risk management strategies.

Historically, real estate has had a low correlation, performance-wise, to stock and [bond](#) investments, making it a desirable portfolio [diversification](#) tool. Unfortunately, buying and selling physical [property](#) is not nearly as simple as trading securities.

The NPI Index

The National Council of Real Estate Investment Fiduciaries Property Index (NPI) is the accepted index created to gauge the investment performance of the [commercial real estate](#) market. Originally developed in 1977, the unleveraged index is worth a total of about \$834.2 billion (as of Q4 2021), from all around the U.S.¹

Commercial real estate investments are categorized into the following investment types:

- [Private equity](#)
- Private debt
- Public equity
- Public debt

How Real Estate Derivatives Work

Developed for the private equity sector, the derivatives offered on the NCREIF index are based on [swaps](#) that come in various forms, allowing investors to swap exposure on either the [appreciation](#) or [total return](#) of the index itself, or by swapping exposures from one land use to another.

One method is to "go [long](#)" (replicating the exposure of buying properties) or "go [short](#)" (replicating the exposure of selling properties). Another method is to swap the total return on the NCREIF index broken down by property sector, thus allowing investors to swap the returns from office-related real estate for retail real estate, for example.

The return swap allows two investors on either side of the swap to execute strategies that cannot be accomplished with actual assets in the private real estate market. Swaps allow investors to [tactically change or rebalance their portfolios](#) for a specific period of time without having to transfer title to the assets currently on the [balance sheet](#). Contracts for up to three years are usually managed by an [investment bank](#), which acts as the [clearinghouse](#) for the funds.

In the case of an investor going long the total return of the NCREIF index, they would accept the total return on the NPI (paid quarterly) on a predetermined [notional amount](#) and agree to pay a benchmark short-term interest rate, plus a spread (margin) on the same notional amount. The other party to the swap would receive the same cash flows in reverse, pay the quarterly index return, and receive the benchmark rate plus the spread.

Assuming that there are investors for both sides of the trade, two investors wishing to trade one property exposure for another could trade the return of the NPI for that particular property type for another. For example, a portfolio manager who feels that their fund is over-allocated to office properties and under-allocated to industrial ones could swap a portion of the office exposure for industrial ones without actually buying or selling properties.

A Public Equity Index

Instead of the NPI, derivatives for exposure to the public equity sector of the commercial real estate market use the total return of the [National Association of Real Estate Investment Trusts](#) (NAREIT) in order to calculate the [cash flows](#) accepted (for the long investor) or paid (by the short investor).

This index provides the performance return for the market of public securities [collateralized](#) by commercial real estate. For example, the swap receiver pays the benchmark short-term interest rate, plus a [spread](#), to go into a one-year index swap with a \$50 million dollar notional amount, and they would receive quarterly payments from the NAREIT index on \$50 million. Once again, the investor can get a fully diversified public real estate exposure without buying a single asset.

Real Estate Debt Derivatives

Due to the breadth and depth of the [tranches of different risk profiles](#) from the underlying pool of commercial real estate mortgages found on the [commercial mortgage-backed securities](#) (CMBS) market, real estate derivatives are also available on real estate debt positions. The swaps for public real estate debt are based on indexes of the CMBS market.

Thanks to the breadth and depth of the data from a large number of transactions (relative to equity real estate), the CMBS indexes are a much better performance indicator for their respective markets than those for their equity counterparts. The most notable difference between the equity swaps and the debt swaps is that the receivers of the interest rate-based payments receive the benchmark rate *minus* a spread, as opposed to the equity swaps, which are usually based on the benchmark rate *plus* a spread. This is because [underlying securities](#) are usually financed by short-term revolving [repo](#) term debt, which is usually at the benchmark short-term rate minus a spread, and so the rate is passed on to swap counterparties.

Private real estate debt derivatives, such as [credit default swaps](#) (CDSs), are usually used to [hedge](#) credit risk. Derivatives such as loan swaps provide the swap party with both the interest rate and [credit risk](#), while the asset (a commercial real estate loan) remains on the counterparty's balance sheet. Thus, a [mortgage lender](#) may hedge portions of its debt portfolio for various investment terms without having to sell the loan itself. In this way, investors can move out of certain sectors of the real estate market when they feel the return is not commensurate with the risk, and then later regain the exposure when the market for that particular sector improves.

Special Considerations

Because commercial real estate assets are [capital intensive](#) and relatively [illiquid](#), real estate investors have found it hard to hedge their exposure or execute [alpha](#) strategies. High transaction costs and a market less efficient than that of stocks and bonds have added to the difficulty in rebalancing portfolios in response to market changes.

With real estate data becoming more transparent and transaction information becoming easier and less costly to obtain, real estate indexes have become more relevant, leading to the creation of an increasingly efficient derivatives market. Real estate derivatives allow investors to change their exposures to specific risks and opportunities without the need to buy and sell assets. These derivatives allow for investment in a different sector of the real estate equity market or the trade of a real estate exposure for a variable interest rate plus or minus a premium.

The ability to swap exposures allows the real estate investor to become more tactical when investing. They can now move in and out of all four quadrants of the real estate market, which allows for better risk management and the potential for increasing the [short-term](#) or [long-term](#) return on their investments.