Risk Integrated

Real Estate Weekly

Serving America's #1 Market

16 January 2008

Using Property Derivatives in Real Estate Transactions

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Derivatives are agreements between two counterparties to exchange cash based on the value of an index or security. Commercial Real Estate (CRE) investors are very familiar with interest rate derivatives such as swaps and caps which make payments based on interest rate indices. For property derivatives the payments are based on the change in a property index. In the UK property derivatives have been growing over the last five years and now there are several hundred trades per year. The UK has been the leader in these instruments because of the availability of a reliable index provided by International Property Database (IPD). Now similar indices are being offered in the US by the National Council of Real Estate Fiduciaries (NCREIF) and Standard & Poor's (S&P). This is bringing the benefits and dangers of the derivatives world to the US CRE market.

The most straightforward use of a property derivative is a forward contract in which Investor A agrees to pay a fixed amount at a fixed time and in return, Investor B agrees to pay a fixed multiple of the property index. For example, Investor A may agree to pay $12 M in five years and in return Investor B will pay $10 M multiplied by the property index at the five year point (assuming that the index equals 1 at the start of the contract). If the market rises more than 20% over the next five years, Investor A receives more than $12 M and therefore wins. If the rise is less than 20%, then Investor B wins. This is an example of a straightforward bet on the property market.

Alternatively, if Investor B already owns a property, he may enter into the transaction to ensure that he will be in a position to refinance a loan at the five year point and avoid the possibility of default. In this case, if the market rises more than 20%, Investor B will have to make a payment on the derivative, but the value of his property should also increase, so the overall financial position should be fine.

On the other hand, if the market falls, Investor B will receive cash from the derivative that should be sufficient to pay down the expiring loan, therefore keeping a healthy loan-to-value ratio for the property, allowing it to be refinanced. A key in this transaction is the word "should." The payment on the index will rise and fall with the overall market, however, the value of the property will be specific to that building so the change in values will not be exactly the same. This type of transaction is a way of locking in the change in the value of the property relative to the overall market.

Rather than locking in profits so completely, the investor may prefer to have a cheaper kind of insurance such as a floor. A floor only makes payments if the index falls below a set level. For example, Investor C may promise to pay Investor B $10 M multiplied by the extent to which the index falls below 90% at the five year point. In this case Investor B would receive nothing, except in an unusually bad situation. Therefore, Investor B's profits may vary greatly, but at least he will be sure of getting extra cash to pay back the loan if things get bad.

These examples can give a general protection to the final value of a property transaction. In addition the investor may also want some protection for uncertainties in the annual cashflows. This will help to reduce the risk of a payment default. A simple way of thinking about it is that if the investor has a loan with fixed payments, and rental rates fall significantly, the income from the property may not be sufficient to make the debt payments. Property derivatives can be used to hedge against this possibility. Given that rental rates are correlated with property values, a property derivatives could provide extra income in years of reduced rent. The complexity in arranging this is in figuring out exactly which property derivative should be used to hedge an investment in a real property. Real properties have complex lease structure with fixed periods, upward only reviews, expirations, breaks, and the possibility of tenant defaults. Furthermore, the correlation between general market values and specific leases is not perfect.

Due to the complexity of reality, the effectiveness of any given derivative should be analyzed using a comprehensive approach such as simulation that can incorporate all of the uncertain factors. This can indicate whether a particular combination of derivatives is likely to justify their cost because it offers protection when it is really needed.

On many occasions investors have been burned or bankrupted by investing in complex derivatives on indices such as stocks or interest rates. The normal real estate investor should try to keep their derivatives simple and very tightly matched to the characteristics of the underlying physical property. If used with care, property derivatives can help to stabilize the CRE market and offer protection against having to make forced sales.