A Method for Measuring Financial Engineering

We have published several articles regarding the use of financial engineering in tenant in common (TIC) transactions. We have commented that financial engineering in and of itself is not necessarily bad, it is how financial engineering is used that might cause concern. For example, I frequently use financial engineering when acquiring my personal properties, but only after establishing a price without the use of any financial engineering. That way, I can increase my cash flow while reducing the risk of overpaying for the asset in the first place. We suggest that all investors who are considering using financial engineering fully understand the financial impact of such engineering in order to make sure that the financial engineering is supplementing the cash flow, not creating the basis for value in the first place. In this article, we will attempt to describe a method for measuring the impact of financial engineering in TIC transactions.

First, let's understand the concept of financial engineering. Simply stated, any technique that increases the cash flow above the 'natural' cash flow can be considered financial engineering. This could be in the form of a seller lease-back of vacant space; it could be in the form of a bought-down, or otherwise reduced interest rate for the mortgage; it could be in the form of reserves being re-injected into the cash flow. Regardless of the form, the purpose is to increase cash flow above the 'natural' amount produced by the property.

In general terms, a property's cash flow can not be greater than net operating income (NOI) less debt service. The property may have anticipated capital expenses, but these can be funded through reserves. The only way that a property's cash flow can be greater than NOI less debt service is to (1) add additional income (as through a lease-back of vacant space); (2) buying down the interest rate (so that the debt service is reduced); (3) using non-constant interest rate financing (known as 'bow-tie' financing, it consists of paying a lower than contract or 'coupon' rate of interest in the early years, which increases over time so that the rate at the end of the term is higher than coupon and the average rate paid is the contracted coupon rate); (4) injecting reserves below the line to pump up cash flow.

Why does this work? The power of leverage makes financial engineering feasible. If I want a 6.0% return for an investment, I will pay $16.67 for every dollar of cash flow ($1/.06). If I want a 7.0% return, I will pay $14.28 for every dollar of cash flow ($1/.07). This means that, as a seller, I can make a profit even if I spend considerable amounts to create each additional dollar of cash flow. It doesn't matter which form of financial engineering I use, as long as I spend less to achieve the engineering than the ratios shown above, I can make money. The same concept applies to interest rates. Every dollar of reduced interest rate creates the leverage multiple shown above. Generally speaking, a lender is ambivalent as to whether they receive their return over time (in the form of periodic payments) or up front (in the form of loan points). The math is very straight forward; on a 10-year loan, every 1.0% of loan points paid is equal to 13-14 basis points of interest rate (a basis point is 1/100 of one percent). So, by paying 3.0% on upfront loan points, I can reduce the interest rate by 39 to 42 basis points. Since an investor requiring a 6.0% return will pay me over $16 in value for every $1 in cash flow, it is almost always economically beneficial for a seller/sponsor to pay for the interest rate buy-down in order to create additional cash flow.

But does it work for the investors? Go back to the beginning of this article. I mentioned that I use financial engineering only after first establishing the price. If the price is based on fundamental factors, financial engineering can only increase cash flow. If the price is based on the results after financial engineering, it is very likely that the price will not correlate to market fundamentals (meaning, you paid too much). Given the leverage of additional cash flow (remember the examples above) it is very easy to overpay when financial engineering is factored into the cash flow before establishing price.

8447 Wilshire Boulevard, Suite 100, Beverly Hills, CA 90211 Tel: 877.886.1031 Fax: 323.653.6233

A Method for Measuring Financial Engineering [Continued]

Some forms of financial engineering can cause additional issues. For example, cash on cash is defined as cash flow from the property divided by the cash investment in the property. If I use some of the equity from investors to establish a reserve fund and I then use some of those reserves to increase cash flow, can I really describe this as cash on cash, or is it really a return of capital? We would argue that it is a return of capital and that misstating this as cash on cash might create some liability for a broker who characterizes it otherwise. If it really is a return of equity, does this create a tax issue for the investor because of gain recognition on that portion of returned capital? Finally, if reserves are being used to supplement cash flow; they can not be available for actual capital expenses at the property, which may result in reserves that are insufficient to cover the capital expenses. It is one thing to receive reduced cash flow. It is another thing entirely to face a capital call. Clearly, it is as important to understand the form of financial engineering as it is to understand the basic economic impact.

OK, so how can we measure the economic impact? It depends on the form of financial engineering. If it consists of a lease-back of vacant space, or the injection of reserves, simply subtract these items and re-calculate the 'natural' cash on cash return. For example, if a property costs $1,000,000 and is expected to produce $65,000 of cash flow, it is expected to provide a 6.50% return. If $10,000 of the cash flow comes from a seller lease-back or injection of reserves beyond the amount required for capital expenses, we deduct this amount and calculate the 'natural' return ($55,000/$1,000,000) of 5.50%. We then ask ourselves; "Would I accept this as my minimum cash on cash return?" If the answer is 'yes', then the financial engineering is positive. If the answer is 'no', then the financial engineering is negative and is simply boosting the price. We then need to apply the 'natural' cash flow against our minimum acceptable rate of return to calculate the maximum price that we would pay for the property. For example, if I required a minimum 6.00% return, I would divide the natural cash flow of $55,000 by 6.00%, resulting in a value to me of approximately $917,000.

If the financial engineering consists of a bought-down interest rate, or through 'bow-tie' financing, I need to recalculate the 'natural' cash flow using the original interest rate. For example, if the stated interest rate is 5.92% and the loan was bought down by 33 basis points, the original interest rate was 6.25% (5.92 + 0.33 = 6.25%). I recalculate the debt service based on the original interest rate to calculate the 'natural' cash flow. I then calculate the resulting cash on cash return and, again, ask myself if the result is an acceptable minimum rate of return. If yes, then the financial engineering is positive. If not, we again apply the 'natural', cash flow against our minimum acceptable return to calculate the maximum price that we would pay for the property.

As stated before, financial engineering is neither good, nor bad; it is all in how it is applied. Use it after establishing price and you may engineer your way to improved returns. Use it before establishing price and you may need an engineer to extricate you from a financial mess. As with all of our articles, we welcome your comments and feedback.