COMMERCIAL PROPERTY LEASE OPTIMIZATION: BENEFITS AND USE IN RETAIL AND INDUSTRIAL LEASING

How financial engineering accelerates the leasing of commercial space

Contents

Executive Summary

In this white paper we explore one of the most underutilized tools in lease finance; in particular lease optimization (in the commercial property sector). We will not focus on the mathematics nor overwhelm with the complexity of finance, but will seek to demonstrate how a novice leasing agent or professional investor who is tasked with the leasing of commercial space can benefit. As with any transaction there are always two disparate parties with competing agendas, the Landlord or property owner, and the Tenant Company, both of whom must find common ground through a myriad of financial variables that comprise the lease. Most often this process is antiquated between spreadsheets and methodologies that are most certainly difficult to replicate and more importantly are fraught with error.

How many lease transactions have been lost due to these errors of process; and how many more could be successfully procured should we find the proper solution? We will explore this and other challenges embodied in the field of commercial real estate leasing and lease optimization. To help bridge any knowledge or memory gap, we will do our best to anchor the origins and ideas explored with specific examples to demonstrate how new developments in the field of lease financial technology can remedy negative or uncertain leasing outcomes by promoting transparency and logic in a simplified and digestible form.

CRE Lease & The Bond

Let us start by stating the obvious, when you compare the financials of a bond to that of a commercial real estate lease; there is no comparison. There are many more financial variables that create the overall structure of the financial instrument we call the lease. There are actually 128 possible ways to structure an 8 variable input lease with 4 variations chosen by selection. This makes par value and a fixed coupon bond -kids play.

Aside from this complexity, the two investment instruments the bond and lease do share a common trait by analogy, that is the stripped bond. Without going into too much detail a stripped bond is where a typical bond with Par Value and Fixed coupon are "stripped" such that an investor sells away the strip or coupons and retains the interest in the Par Value at maturity.

By analogy the same application can also be explored in the valuation and structuring of leases. Separating the space lease into two components, price for space, and rental strip, will be integral in observing the mechanics of lease optimization as we continue.

Why Optimization Matters?

For years leasing professionals have relied on the best methods available to both structure, negotiate, and ultimately lease space in the commercial property markets; be it spreadsheets, back-of-the-envelope calculations similar to "effective rent", or other arcane methods. Ten years ago or more this may have been satisfactory, but in today's sophisticated commercial property markets, excessive pricing, reflected in abnormally low yields, puts inordinate pressure on property investors to perfect ways to operate and lease with greater precision. In the mid 1990's when commercial property was trading at 10.0% CAP rates, small back-of-the-envelope calculations and poor methodologies such as blending a 5-year lease with a synthetic 2-year lease in an attempt to analyze a 7-year proposal may have been satisfactory, but not today. The excessively low property yield environment simply does not provide for margins of error.

These margins of error can best be described in the table below Figure 1. What we can extrapolate from this table is the impact or in this case the errors created when comparing the archaic Effective Rent method to the precise Optimized Rent method. The objective here is quite simple, start with a Base Lease Plan, then increase or decrease the leasing costs and solve for rent using either approach (either Effective Rent or Optimized Rent).

To summarize the data in brief we will focus our attention on the table outliers, the first row marked by the $30.00 reduction in leasing costs, and the last row marked by the $30.00 increase in leasing costs.

Figure 1

	Rent Quote Discrepancies - Effective Rent vs. Optimized Rent				
	Change in Leasing Costs	Net Effective Rent (straight-line)	Optimized Rent	Misquoted (Rent)	Yield (Loss/Gain)
	-$30.00	$6.00	$5.86	$0.14	1.04%
	-$20.00	$6.17	$6.08	$0.09	0.67%
	-$10.00	$6.34	$6.29	$0.05	0.32%
Base Lease Plan	$0.00	$6.50	$6.50	$0.00	$0.00
	$10.00	$6.67	$6.71	-$0.05	-0.30%
	$20.00	$6.83	$6.93	-$0.09	-0.59%
	$30.00	$7.00	$7.14	-$0.14	-0.86%

In row one of the table the tenant has requested that the leasing professional reduce the original tenant improvements by $30.00 psf and requote the starting rental terms. When the leasing professional solves for Effective Rent equal to his Base Lease Plan he resolves to a start rent of $6.00 psf, $0.50 less than the original rental rate quoted ($6.50). When the leasing professional then solves for an Optimized Rent equal to his Base Lease Plan he resolves to a start rent of $5.86 psf, $0.64 less than the original rental rate quoted. In this case the net effective rent method misquotes the starting rental rate by $0.14 psf over the precise Optimized Rent that replicates the original landlord financial plan. As we can see from the table, solving for Effective Rent exaggerated the start rent by $0.14 psf to the perceived upside (or benefit to the Landlord); however, the tenant in this case rejected the proposal as the financial terms were far less favorable than the original Base Lease Plan – the leasing professional is left pondering why the lease was lost.

In the final row of the table the tenant has requested that the leasing professional increase the original tenant improvements by $30.00 psf and requote the starting rental terms. When the leasing professional solves for Effective Rent equal to his Base Lease Plan he resolves to a start rent of $7.00 psf, $0.50 more than the original rental rate quoted ($6.50). When the leasing professional then solves for an Optimized Rent equal to his Base Lease Plan he resolves to a start rent of $7.14 psf, $0.64 more than the original rental rate quoted. In this case the Effective Rent method misquotes the starting rental rate by -$0.14 psf less than the precise Optimized Rent that replicates the original landlord financial plan. In this example, as juxtaposed to the initial case, solving for Effective Rent understates the start rent by -$0.14 psf to the detriment of Landlord. This example poses an equally challenging

problem for the leasing professional or landlord. To be clear, if your current dividend yield is 4.0%, and you followed this methodology, everything else equal, your dividend would over time be reduced from 4.0% to 3.14% (4.0% - 0.86%). On a leveraged basis this impact to yield would be magnified with even greater negative ramifications.

Aside from the technical deficiencies explored above there is also a purely deductive flaw inherent in the Effective Rent straight line method.

Let's take a simple case:

1. Your "Market Rent" is $10.00.
2. Embedded and Implied in that "Market Rent" is Leasing Costs of $15.00
3. Therefore; Effective Rent equals $7.00

Figure 2

	Effective Rent Calculation – Original Lease Quote					
	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5
Market Rent		$10	$10	$10	$10	$10
Leasing Costs	$15	$3	$3	$3	$3	$3
Effective Rent - SL		$7	$7	$7	$7	$7

Given this case, the philosophical question is, how do you pay for the initial Leasing Costs to acquire the rental stream in the form of a lease you write with the Tenant? Your first inclination might be, you have already budgeted the $15.00 figure, therefore the initial cost is accounted for. This may be true; however, now assume that the Leasing Costs have increased from $15.00 to $30.00 psf. One might say this is straight forward, we just solve for Effective Rent, and my new market rent is $13.00, right?

Figure 3

	Effective Rent Calculation – Modified Lease Quote					
	Time 0	Year 1	Year 2	Year 3	Year 4	Year 5
Market Rent		$13	$13	$13	$13	$13
Leasing Costs	$30	$6	$6	$6	$6	$6
Effective Rent - SL		$7	$7	$7	$7	$7

On a back-of-the-envelope method like Effective Rent this may appear equal; however, there is one flaw, where does the additional $15.00 in initial costs necessary to acquire (incentivize) the additional rent and overall rental stream come from? Think of it another way, give me an example of an investment today whereby simply increasing the coupon payment your initial investment or "Initial Cost" to acquire the asset is zero? To be clear, if your total property capital account has a maximum budget of $15.00 psf reserved to execute a lease, where does the additional $15.00 or doubling of the

capital account come from, new debt, new stock issuance, and at what cost? In an imperfect world, if you could not borrow, the lease could not be written; and in a perfect world, the additional costs to satisfy the lease would be reflected in a higher market rental rate than what was originally contemplated. However convenient and simple Effective Rent may be, you cannot in practice decouple the initial investment required from the rental stream sought. The investment will never pay for itself.

Optimization in Excel

Optimization to the rescue. For years' spreadsheets or ad hoc recipes have served as the technological backbone for commercial real estate finance. However powerful and robust these models may have been, their warehousing, use, and re-use, have always created challenges to the organizations they serve. For example, was an errant entry made by an inexperienced user, has a broken formula gone untraced, has it been accessed from unprotected locations, etc. Additionally, there is just the limitations of the technology, in this case Excel, to handle a complex series of interlinked data (in this case 128 distinct lease structures) unified in such a way that Excel's built in optimization library can operate against this amount of fixed stored structure without crashing both Excel and the machine.

Lease Optimization

In-memory quant to the rescue; or RAM for short. In RAM or random-access memory optimization your data is not stored, retrieved, and re-stored in a fixed form to resolve a complex problem, the data and the functions themselves are all fluid and dynamic in memory to improve and expedite the desired solution. For our particular case, the desired solution is to optimize the financial terms of a commercial property lease - to expedite approval and decision making. That being said, this is the direction, if not the present form of nouveau analytics- unstructured, dynamic, and of course real-time.

Practical Application & Benefits for Leasing

Let us begin by exploring the first of two particular target solutions. The first example we will discuss will be the target NPV, or net present value solution, and the last will be the target IRR or property hurdle rate solution. To clarify some terminology, when we describe NPV and IRR in terms of a "Target", we are describing the specific leasing goals that we are attempting to meet or "Target" given changes in any financial terms of the lease. To be clear, whether you are a property owner or leasing professional the target is simply applying your original leasing quote to the space in question to derive a target value (NPV); or simply specifying a target IRR given basic property pricing knowledge

– this is the target. For any property owner or leasing professional deriving a lease NPV or having knowledge of property price and target IRR (hurdle rate) for the Property should be common place. The target is simply the goal we seek.

For example, let's assume the following leasing plan or lease quote as described in Figure 4. It should be understood that the leasing plan or leasing quote represents the property owner's current business plan assumption for the specific property and space in question. If the rate of return chosen for discounting purposes was 10.0%, as in this example, the target NPV for the space is as expected; $320,092.72. This value represents the time zero benefit, over and above the costs of procuring the lease, at a 10.0% return threshold. As a point of consideration if the costs to procure the lease were increased by $320,092.72 the NPV would be $0.00 and the IRR would be precisely 10.0%. (As an aside, the target NPV could be calculated in a company spreadsheet or simply within the F9Analytics® - Lease Compare Service).

Figure 4

Landlord - Original Lease Quote	
Term:	5 Yrs
Lease Start Rate:	$24.00 PSF/Yr
Lease Escalations:	3%
Rent Step Year:	1, or Increases Every Year
Net Rentable SF:	5,000
Tenant Improvements $PSF:	$30.00
Leasing Commissions:	5%
Discount Rate:	10%
* NPV (Target Value):	$320,092.72
* This is the calculated NPV of the given Leasing Guideline.	

As a property owner or leasing professional this is where the beauty of technology and mathematics begins, and the broad application and benefits in leasing becomes quickly apparent.

The leasing professional simply inputs their leasing quote into the optimizer with the target NPV for the space. Once the inputs are complete, any change in financial terms requested by the tenant can be introduced and the lease can be optimized accordingly. The solution result, if feasible, will be the optimized lease structure that is financial equivalent to the original lease plan.

Let's say the leasing professional representing the property owner is negotiating the terms of a lease with tenant, and the tenant is requesting the following:

(1) Re-quote the lease with no escalations or "flat" vs the 3.0% escalation in rent per year.
(2) Increase tenant improvements (TI) for a build-out of $80.00 psf minimum (not the $30.00 TI initially quoted).
(3) Include 6 Months Free Rent (beginning month 1), which was not initially offered.

To review we have:

1. Lease Escalations: 3.0% → Flat ("No Increases")
2. Tenant Improvements: $30.00 psf → $80.00 psf
3. No Free Rent → 6 Months Free (beginning Month 1)

As the leasing professional hears the changes, they simply update the inputs with the requested changes (in this case 3 changes) and solve for the desired financial term or terms that make the lease meet the property owner's financial goals.

In this particular example, the leasing professional optimizes the lease to a starting lease rate of precisely: $44.31 psf – the lease rate where the 3 lease modifications requested by tenant is precisely equal in financial terms to the original lease plan.

This is the power of lease optimization, the ability to completely modify the original terms of the lease and solve to a new lease, that for all intents and purposes is financially equal to the original.

The ease of use and the ability to double check or test the outcomes is equally easy. Once you have optimized for a financial term as in this case rent at $44.31, you can simply key in that result and re-run the input terms by selecting the radio button and clicking optimize to check your work- this makes verifying and structuring of a lease effortless.

Extended Optimization – Lease to Property IRR

In distinguished circles in lease finance and investment there often arises a fundamental debate surrounding lease timing, length of lease term, and the delineation between what should be considered a contract vs speculative lease. More times than not the conversation began by simply describing leasing objectives at an individual lease or micro level; however, in an expedient amount of time the conversation quickly expands too broader macro level questions centered more appropriately around property underwriting and investment.

For example, leasing propositions such as the following remain elusive and ephemeral to leasing professionals:

(1) The leasing plan dictates a 5-year lease term and the tenant has requested 7-years, so why is the asset manager describing a methodology that combines a hypothetical 2-year "speculative" lease beginning year-6 with the original 5-year "contract" lease to derive new lease pricing?

(2) A sophisticated tenant has shown interest in leasing a considerable portion of the building, but requests a 10-year term lease. Why does there remain a financial divide between the tenant and landlord when the tenant has solved for the same NPV over 10-years that the landlord required over 5-years?

Through applied technology we can now answer these elusive questions as easily as optimizing for NPV, by simply extending our lease optimization to target property IRR. What should be noted emphatically is that the IRR of the lease is without condition absolutely relative to the value of the space. To be clear, if you are shown a leasing metric with a 30.0%+ IRR, that lease metric is not relative nor financially meaningful. For a lease IRR to be indifferent from property IRR there must be a proper mathematical accounting for the value of the space relative to the value of the underlying lease structure. This brings us back to our introduction on CRE & The Bond where we describe separating the space lease into two components, price for space, and rental strip, (similar to the bond). We will use this approach along with the relative value derived from our lease and price assumptions to determine the optimal lease that targets precisely the property IRR (or investor Hurdle Rate).

To examine this further, let us observe a situation similar to proposition #2 above. To begin, we start with a business leasing plan identical to the one we described earlier. This leasing plan sets forth the following financial terms for a 5-year lease.

Figure 5

Landlord - Original Lease Quote	
Term:	5 Yrs
Lease Start Rate:	$24.00 PSF/Yr
Lease Escalations:	3%
Rent Step Year:	1, or Increases Every Year
Net Rentable SF:	5,000
Tenant Improvements $PSF:	$30.00
Leasing Commissions:	5%
Discount Rate:	10%
* NPV (Target Value):	$320,092.72
* This is the calculated NPV of the given Leasing Guideline.	

As described in proposition #2 above, a sophisticated tenant has shown considerable interest in leasing the space but will not pursue it further unless a firm pricing quote can be given for a 10-year lease. The tenant has requested his facilities team analyze the original 5-year lease quote under a scenario that would extend the original 5-year lease to 10-years while targeting an NPV within a

relevant band of landlord observations. For discussion purposes we will assume that the tenant has made an observation at a 10.0% discount rate, and that he has received supporting market intelligence that this is the rate of choice.

The tenant's facilities team modifies specific financial terms of the lease, including the required 10-year term, while holding other terms equal. The 3 lease modifications that the tenant presents are the following:

1. Term: 5-years → 10-years
2. Lease Escalations: 3.0% → Flat ("No Increases")
3. Tenant Improvements: $30.00 psf → $81.09 psf

And what is the NPV? Precisely $320,092.72 (the starting rent unchanged at $24.00 psf). From the tenant's perspective, the lease modifications proposed, however varied, are precisely equal to the original lease quoted by landlord. From a financial perspective, these two varied lease structures are financially equivalent and neither one should be chosen over the other except for preference.

So why the reluctance by landlord to accept the tenant proposal when the yield on lease investment is equivalent over time? And why do imperfect and flawed methodologies similar to proposition #1 arise? They arise from the same logical dilemma that sophisticated seasoned investors struggle to reason through; specifically, what is considered a "contract" lease and what is considered "speculative"? A "contract" as considered here is a lease that is executed or can be executed at current terms today, given a tenant's willingness to accept those terms and move to a lease contract. A "speculative" lease, as the name suggests, is a (speculative) lease that may or may not occur in the future; and at financial terms that may or may not be achievable in the market at that point in time.

Each labeling (or designation) of space comprises in aggregate the cash flow (in most cases 10-years) that support the underwriting and investment in the property at a given price. This price has been derived from targeting a required investor IRR or hurdle rate. Not surprisingly, the price paid at property acquisition includes some percentage of space within the projected 10-year horizon that is purely "speculative" and this is where the difficulties in what we described in proposition #1 and proposition #2 arise.

The property investor is faced with the two-pronged leasing dilemma; one, accept a reduced risk 10-year lease from tenant today with no rollover exposure (albeit at a lower yield); or two, re-price the 10-year tenant proposal with elements of a "speculative" lease that may or may not happen in the future. To be clear, the second option presumes that the property investor believes that there is an equal chance of replicating two "speculative" 5-year leases as there is in accepting one 10-year "contract" from the tenant today. This is the crux of optimizing a lease for property IRR.

When we optimize a lease for property IRR, what we are in fact doing at the individual lease level is introducing the allocated price for space with residual inflation as an additional parameter to optimally structure the lease. By taking this approach, we are able to precisely optimize an individual lease to hit property level IRR targets and overall financial objectives from "the ground up".

In our example, the leasing professional or property investor, influenced by strong tenant demand, rejected the tenant proposal (that targeted Lease NPV), and chose to optimize the lease to target property IRR. They input the additional required parameters for price and inflation and optimize the lease for starting lease rent.

To review we have:

1. Term: 5-years → **10-years**
2. Lease Escalations: 3.0% → **Flat** ("No Increases")
3. Tenant Improvements: $30.00 psf → **$81.09 psf**
4. Property Purchase Price SF: **$200 psf**
5. Projected Property Inflation: **2.0%**

> Note: If the Property was acquired 1 year ago today at $196.07 psf, you would use the inflated value in today's terms or $200 psf. ($196.07 inflated at 2.0%).

The result of the optimized lease for starting rent is precisely $30.94 psf – the lease rate where the 3 lease modifications requested by tenant provide a lease IRR (yield) precisely equal to the target property IRR (yield) sought by the property investor. This is the power of lease optimization.

For further information on financial research and literacy in the commercial property sector, please contact:

F9Analytics
Corporate Office
2 East Congress Street, Suite 900
Tucson, AZ 85701
Tel 800.851.3572
www.f9analytics.com

F9 Analytics®