ANSWERS TO STUDY QUESTIONS

Chapter 30

30.1. Gross leases require the landlord to cover all operating and maintenance expenses, while net leases require the tenant to pay most of the direct operating costs (known as pass-through expenses) for their space and a portion of the common areas. Generally, the tenant would prefer the gross lease only if budget risk were particularly important to them, since the landlord must price in the uncertainty of future operating expenses. The landlord would generally prefer a net lease since this provides an incentive to the tenant to conserve with respect to the use of utilities they actually pay for and this provides greater certainty in the net return to the landlord or owner.

Note: When a landlord invests in energy saving equipment they may prefer a gross lease since the projected savings may not be credible to a skeptical tenant and this allows the landlord to get payback on investments in energy upgrades to the property.

30.3. When market conditions are weak with higher than average vacancy rates, we often see higher rental concessions.

30.5. The key is whether or not there is vacancy among large contiguous spaces, as opposed to scattered spaces that are too small to meet the needs of a large tenant.

30.7. Lease term and interlease risk matter as well as default risk. One tenant may have a lower ALV than another, if the same discount rate is used, but when the risk of default is factored in, the relative ALV may reverse. Longer-term leases eliminate the cost of re-leasing the space and reduce the probability of vacancy, so term matters a great deal.

30.9. Tenants want maximum flexibility. A short-term lease allows for maximum mobility and lowers the transaction costs of a inter-term lease move where a lease cancellation penalty is required. However, the tenant will also want options to renew so an ideal lease may be one with several options. This flexibility is not free and the landlord will need to be compensated for providing a shorter-term lease and several options over a longer-term lease with no options to renew. A landlord may want a shorter-term lease if they believe that the market conditions will be in their favor and that rents will significantly escalate at the time of expiration.

30.11. Tenants that invest a large amount of their own funds in tenant improvements or require unique space configurations and designs are thought to be stickier than tenants that can base operations in vanilla generic space. Other tenants that are considered sticky are law firms and architectural firms, but a localized analysis of prior tenant habits to renew or not is the best approach to use for judging the stability of existing tenants.

*30.13. Value of option as of end of year.5 conditional on mkt. rent then = \$18/SF:

$$\$8.34 = (18-16) + \frac{(18-16)}{1.10} + \frac{(18-16)}{1.10^2} + \frac{(18-16)}{1.10^3} + \frac{(18-16)}{1.10^4}$$

Value of option then if mkt. rent = \$14/SF = 0.

PV of option with 50% probability of the upside outcome and 20% OCC for option is thus:

$$\$1.6756 = 0.50\left(\frac{8.34}{1.20^5}\right) + 0.50\left(\frac{0}{1.20^5}\right)$$

5-year annuity in advance with this PV is per year:

$$\$1.40 = (0.10)1.6756/\left(0.10\left(1 - \frac{1}{1.10^5}\right)\right)$$

Subtract this from the \$11.40 per year effective rent from the answer to 30.12a, to arrive at \$11.00 effective rent from the landlord's perspective, including the renewal option.

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30.15. With mean (expected) tenant rent offer = \$15.00/SF, normally distributed with Std.Dev = +/−\$3.00/SF; Average tenant offer arrival rate = 2/mo = 24/yr; Interlease discount rate = 12%, Intralease discount rate = 8%; and Lease Term = 5 years.

For example, for an asking rent of \$15.00/SF, we would have:

Prob(refuse offer) = NormDist(x,mean,stdev) = NormDist(15,15,3) = 0.50.

Expected wait = 1/(ArrRate∗(1−Prob(refuse))) = 1/(24∗0.5) = 1/12 = 0.0833 yrs = 1 mo.

Lease PV = PMT(IntrLsRate,LseTerm,AskRent,FV,typeBegin) = PMT(.08,5,15,0,1) = \$64.68/SF.

Bldg PV = LsePV/$(1+\text{InterLseRate})^{\text{wait}}/(1-1/(1+\text{InterLseRate})^{(\text{wait}+\text{Term})})$

= $64.68/1.12^{.0833}/(1-1/1.12^{5.0833})$ = \$146.32/SF. (From the geometric series formula, section 8.2.7 in Chapter 8.)

With an avg. vacancy rate of 0.0833/(.0833 + 5) = .0833/5.0833 = 1.6%.

But \$15/SF is not the optimal asking rent for the landlord (it is too low). The optimal asking rent is found by numerical search to be approximately \$18.70/SF:

Prob(refuse offer) = NormDist(x,mean,stdev) = NormDist(18.7,15,3) = 0.8913.

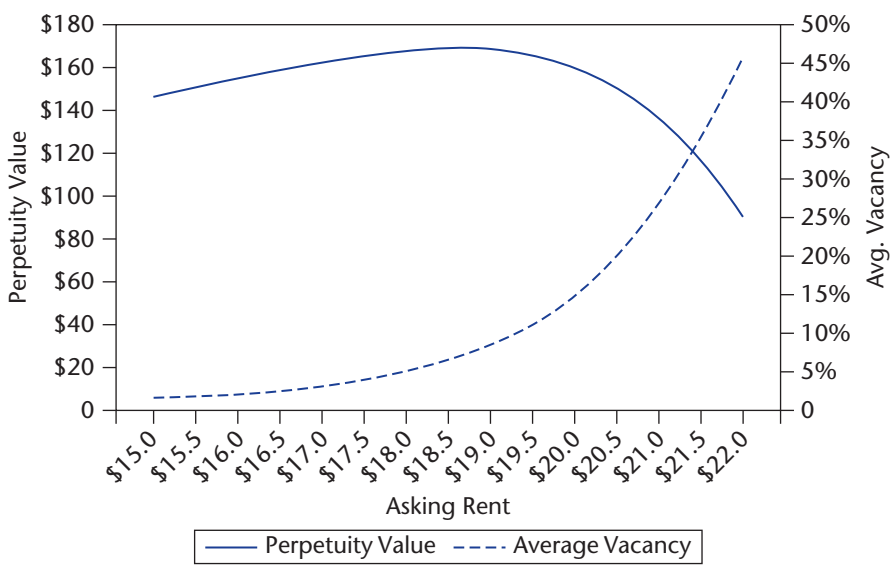
Expected wait = 1/(ArrRate∗(1−Prob(refuse))) = 1/(24∗0.8913) = 1/21.4 = 0.3832 yrs. = 4.6 mo.

Lease PV = PMT(IntrLsRate,LseTerm,AskRent,FV,typeBegin) = PMT(.08,5,18.7,0,1) = \$80.64/SF.

Bldg PV = LsePV/$(1+\text{InterLseRate})^{\text{wait}}/(1-1/(1+\text{InterLseRate})^{(\text{wait}+\text{Term})})$

= $80.64/1.12^{.3832}/(1-1/1.12^{5.3832})$ = \$169.06/SF.

With an avg. vacancy rate of 0.0833/(.0833 + 5) = .0833/5.0833 = 7.1%.



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