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Alternative Valuation Methods for Leasehold Properties

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Introduction

The case study presented in this article pertains to the appraisal of an actual strip plaza subject to a ground lease. Included is the traditional Income Approach, which is used primarily to test the reliability of the value estimate employing a modified method of the Direct Sales Comparison Approach normally considered inappropriate for properties on ground leases. As an additional check against the value estimate, an Investment Analysis reflecting the anticipated economic performance of the property has been prepared to correspond with the remaining term of the ground lease.

The subject property, built in 1967, is a small, basementless strip plaza containing three commercial units and situated on a 0.507 acre parcel of land held under a ground lease. The effective date of appraisal is July 1, 1985 and the ground lease expires in 13 years and 9 months, on March 31, 1999. During the remaining term of the ground lease, the Head Lessee is entitled to the revenue generated from the three commercial sub-lessees, and is responsible for the payment of ground rent. Consequently, the leasehold interest is represented by the value of the difference in the income collected from the subtenants and the ground rent paid by the Head Lessee to the owner of the site until the expiry of the ground lease on March 31, 1999. Particulars of the ground lease and commercial subleases are detailed as follows:

Ground Lease Particulars

Remaining term as at 1-Jul-85:	13 years and 9 months
Expiry Date:	March 31, 1999
Ground Rent:	1) 1-Apr-84 – 31-Mar-89: $29,160 p.a. ($2,430 payable monthly, in advance)
	2) 1-Apr-89 – 31-Mar-94: $34,020 p.a. ($2,835 payable monthly, in advance)
	3) 1-Apr-94 – 31-Mar-99: $38,880 p.a. ($3,240 payable monthly, in advance)

[1] Subsequently merged with the American Institute of Real Estate Appraisers to form The Appraisal Institute.

Schedule of Leases

Tenant	Lease Term	Area (SF)	Rent PSF	Annual Rent	Monthly Rental
A	1-Oct-79 – 30-Sep-84	2,186	$11.00	$24,046.00	$2,003.83
	1-Oct-84 – 30-Sep-89		**$12.10**	**$26,450.00**	**$2,204.21**
B	1-Mar-83 – 30-Nov-84	1,390	$12.00	$16,680.00	$1,390.00
	1-Dec-84 – 30-Nov-89		**$13.20**	**$18,348.00**	**$1,529.00**
	1-Dec-89 – 30-Nov-94		$14.52	$20,182.00	$1,681.90
	1-Dec-94 – 31-Mar-99		$15.97	$22,198.30	$1,849.85
C	1-Aug-82 – 31-Dec-84	1,210	$12.00	$14,520.00	$1,210.00
	1-Jan-85 – 31-Mar-99		**$13.00**	**$15,730.00**	**$1,310.84**

Indicates current income (current income totals $60,528.00)

Income Approach

All three units are currently under lease or sublease as detailed on the *Schedule of Leases* chart. As an income-producing property, its value is a direct function of the amount of revenue that the commercial space can generate. Accordingly, the Income Approach – with its focus on potential earnings, the costs required to maintain those earnings and investor yield expectations – is an appropriate method of valuation.

As an integral part of the valuation process, numerous steps have been followed in determining the anticipated economic performance of the property. Included are the following:

1. All available leases have been examined and the essential details noted.
2. Although the property is fully leased, an ongoing allowance of 3.0 percent against unexpected vacancies, including bad debt, has been projected.
3. Anticipated realty taxes and common area maintenance charges, including administrative fees, for the ensuing year ending June 30, 1986, have been estimated.
4. Administrative fees attributable to the Tenant A space are the only non-recoverable expenses and have been calculated as $1,511.
5. Rental payments from the Head lessee to the owner have been included as ground rent.

Lease Income

As currently leased, the income from the property for the upcoming year, commencing July 1, 1985 and ending June 30, 1986, will be:

Tenant	Area (sf)	Annual Income
A	2,186	$26,450

B	1,390	18,348
C	1,210	15,730
Total	4,786	$60,528

Vacancy & Bad Debt
Presently, the strip plaza is fully leased. However, as a provision against future vacancies, including bad debt, $1,816, equivalent to 3.0 percent of the lease income, has been set aside.

Non-Recoverable Expenses
Non-recoverable expenses have been calculated to be $1,511, based on the projected common area maintenance charges, realty taxes and administrative fees.

The non-payment of administrative fees in the Tenant A lease amounts to $1,511, in non-recoverable expenses, computed as follows:

$$\frac{2{,}186 \text{ sf}}{4{,}786 \text{ sf}} \times \$3{,}308 = \$1{,}511$$

Structural Repair
An allowance of $605, which is equivalent to 1.0 percent of the lease income, has been set aside for structural repairs.

Ground Rent
Ground rent payments are as follows:

1) 1-Apr-84 – 31-Mar-89: $29,160 p.a. ($2,430 payable monthly, in advance)
2) 1-Apr-89 – 31-Mar-94: $34,020 p.a. ($2,835 payable monthly, in advance)
3) 1-Apr-94 – 31-Mar-99: $38,880 p.a. ($3,240 payable monthly, in advance)

As of July 1, 1985, the remaining term of the ground lease is 13 years and 9 months and the current annual rental payment is $29,160.

Reconstructed Operating Statement
The preceding income and expense items are summarized as follows:

Tenant A		2,186 sf		$26,450
Tenant B		1,390 sf		18,348
Tenant C		1,210 sf		15,730
Sub-total		4,786 sf		$60,528
Less:	Vacancy & Bad Debt (3.0%)		$1,816	
	Non-recoverable Expenses		1,511	
	Structural Repair (1.0%)		605	
				3,932
Net Income (before payment of ground rent)				$56,596
Less:	Ground Rent			29,160
Net Income				**$27,436**

Overall Capitalization Rate

Recorded on the "Capitalization Rate Analysis" chart are nine strip plaza transactions located in the City of Scarborough and the Borough of East York. The overall capitalization rates range from 8.36 percent to 11.61 percent and provide an indication of the returns available from similar investments.

Capitalization Rate Analysis Chart

Sale No.	Sale Date	Lot Area (ac±)	GLA (sf±)	Net Income	Consideration	Price PSF	Income PSF	Overall Cap. Rate
1	31-Jul-81	0.696	12,130	$72,800	$750,000	$61.83	$6.00	9.71%
2	25-Mar-82	0.668	11,560	$141,400	$1,340,000	$115.92	$12.23	10.55%
3	31-Dec-82	1.083	8,560	$121,220	$1,150,000	$134.35	$14.16	10.54%
4	8-Aug-83	0.704	7,400	$90,000	$1,050,000	$141.89	$12.16	8.57%
5	16-Aug-83	0.459	7,700	$116,220	$1,040,000	$135.06	$15.09	11.18%
6	27-Apr-84	0.898	15,715	$69,000	$825,000	$52.50	$4.39	8.36%
7	13-Sep-84	0.696	12,130	$81,240	$700,000	$57.71	$6.70	11.61%
8	11-Feb-85	0.696	12,130	$81,240	$770,000	$63.48	$6.70	10.55%
9	May-85	0.085	4,300	$32,000	$350,000	$81.40	$7.44	9.14%

Considering the age and condition of the improvements, including the limited potential for income growth and capital appreciation, an annual return of 11.0 percent would be required to attract prospective purchasers/investors to the subject property. The duration of the income stream under the ground lease is 13 years and 9 months and the equivalent factor for 11.0 percent is 6.926116.

Capitalized Value of Income Stream

Present Worth of $27,436 per annum		
for 13 years 9 months Discounted @ 11.0%		$190,025
($27,436 x 6.926116 = $190,025)	Say	**$190,000**

Direct Sales Comparison Approach

Due to the limited holding period of the investment (13 years and 9 months), it is difficult to make direct comparisons between similar properties that have recently sold under freehold ownership. As an investment, it has been concluded that in order to attract capital to the subject property, given its restrictive leasehold investment opportunities and the aging nature of the improvements, an overall return of 11.0 percent would be required.

At 11.0 percent, the factor for 13 years and 9 months is 6.926116 and in perpetuity the factor is 9.090909. Therefore, the holding of an investment for a duration of 13 years and 9 months at 11.0 percent, expressed as a ratio or percentage in relation to the holding of a property in perpetuity, is 76.19 percent, calculated as follows:

13 year 9 month factor	@ 11.0%	=	6.926116			
Factor in perpetuity	@ 11.0%	=	9.090909	=	0.7619 or 76.19%	

In other words, the holding of an investment for a duration of 13 years and 9 months at 11.0 percent is equivalent to 76.19 percent of the value of the same property held indefinitely.

The nine strip plazas analyzed are summarized as follows in ascending order of income per square foot and the corresponding price per square foot of building is shown.

Sale No.	Date of Sale	Income PSF	Price PSF of Building
6	Apr-84	$4.39	$52.50
1	Jul-81	$6.00	$61.83
7	Sep-84	$6.70	$57.71
8	Feb-85	$6.70	$63.48
9	May-85	$7.44	$81.40
4	Aug-83	$12.16	$141.89
2	Mar-82	$12.23	$115.92
3	Dec-82	$14.16	$134.35
5	Aug-83	$15.09	$135.06

It is apparent that as the income per square foot increases, there is a corresponding increase in the value per square foot of building area. During the upcoming year, the subject property will generate $27,436 in net income or $5.73 psf. Superimposing the rental rate on the previous chart indicates a value of approximately $55.00 psf of building if the ownership of the subject property were freehold.

As previously stated, the holding of the subject property for 13 years and 9 months is equivalent to 76.19 percent of the freehold value, i.e., holding in perpetuity, at 11.0 percent. If the price per square foot of building for each comparable is divided by the corresponding income per square foot, and if the result is multiplied by the income per square foot generated by the subject property, adjusted by 76.19 percent, it is possible to develop indications of value for the subject property, shown as follows.

Sale No.	Price PSF of Building	÷	Income PSF of Building	x	Subject Income PSF of Building	x	Percentage Adjustment (76.19%)	=	Adjusted Price PSF of Building
1	$61.83		$6.00		$5.73		0.7619		$44.99
2	$115.92		$12.23		$5.73		0.7619		$41.38
3	$134.35		$14.16		$5.73		0.7619		$41.42
4	$141.89		$12.16		$5.73		0.7619		$50.94
5	$135.06		$15.09		$5.73		0.7619		$39.07
6	$52.50		$4.39		$5.73		0.7619		$52.21

7	$57.71	$6.70	$5.73	0.7619	$37.60
8	$63.48	$6.70	$5.73	0.7619	$41.36
9	$81.40	$7.44	$5.73	0.7619	$47.76

The adjusted price per square foot of building ranges from $37.60 to $52.21. Statistically, the following values are indicated:

Mean$44.08 psf of building
Median: $41.42 psf of building

The unit rate of $41.42 psf of building, representing the median value, is considered the most reliable as it eliminates the extremes of both ends of the range. Therefore, the value of the leasehold interest is $198,000, calculated as follows,

Building Area		Rate PSF		Value Estimate
4,786 sf	@	$41.42	=	$198,236
			Say	**$198,000**

Investment Analysis

As a check against the value estimates, a 13 year and 9 month income and expense forecast has been prepared. The following assumptions are contained in the forecast:

1. Rents paid by the tenants will continue throughout the term of each lease.
2. Tenant A will exercise both renewal options at the prescribed rental rates of $13.30 psf commencing 1-Oct-89 and $14.60 psf commencing 1-Oct-94.
3. The 1,390 square feet occupied by Tenant B will be re-leased at five year intervals at $14.30 psf commencing 1-Dec-89 and $15.73 psf commencing 1-Dec-94.
4. Vacancy and bad debt will amount to 3.0 percent of the annual income throughout the forecast.
5. Non-recoverable expenses of $1,511 will escalate 5.0%, simple interest, annually.
6. Structural repair will represent 1.0 percent of the annual income collected in each year.
7. The Head Lessee will make annual ground rental payments of $29,160 until 31-Mar-89; $34,020 until 31-Mar-94; and $38,880 until 31-Mar-99 when the ground lease expires.
8. 14.0 percent is an adequate investment return.

Present Value of	**Income**	**Discounted @ 14.0%**
Year 1	$27,436	$ 24,067
Year 2	$27,360	21,053
Year 3	$27,284	18,416
Year 4	$25,993	15,390
Year 5	$26,069	13,539
Year 6	$27,985	12,750
Year 7	$27,909	11,153

Year 8	$27,833	9,757
Year 9	$26,542	8,162
Year 10	$26,965	7,274
Year 11	$29,071	6,879
Year 12	$28,995	6,018
Year 13	$28,919	5,265
Year 14 (9 months)	$21,632	3,570
Net Present Value		$163,293
	Say	**$163,000**

Summary

Value by Income Approach: $190,000

Value by Direct Sales Comparison Approach: $198,000

Both approaches provide similar indications of value and the Investment Analysis at $163,000 tends generally to support the value estimate.

The application of the Income Approach and the Direct Sales Comparison Approach, in its modified version, illustrates that the two valuation techniques are not mutually exclusive and that there is a definite correlation between the level of income and the price per square foot of building. Furthermore, it has been demonstrated that the sales prices of the comparable properties, held under freehold ownership, expressed as rates per square foot of building area, are synonymous with the net incomes per square foot capitalized in perpetuity at appropriate rates. Given the relationship between the two units of comparison, it is possible to employ the Direct Sales Comparison Approach in the valuation of leased properties.

Once an appropriate rate of return is established, it is possible to cross over from the Income Approach to the Direct Sales Comparison Approach as a means of valuing leasehold interests. As shown, the holding of the subject property for 13 years and 9 months at 11.0 percent represents a factor of 6.926116 compared to a factor of 9.090909 at 11.0 percent in perpetuity. This means that the holding of the investment for 13 years and 9 months represents 76.19 percent of the property's value if held indefinitely, calculated as follows:

$$\frac{6.926116}{9.090909} = 0.7619 \text{ or } 76.19\%$$

After adjustment of the comparable properties by rent level in the Direct Sales Comparison Approach, it is simply a matter of calculating the rate per square foot of building at 76.19 percent of the freehold value, to correspond with the duration of the holding period of the investment.