

Appraisal Methodology for Economic Development Bond Leaseholds in Georgia

**CAVEAT Program presentation
May 19, 2015 by
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I Background and Introduction

- Appointment to DeKalb Board of Tax Assessors in 1994**
- Presented with leasehold position needing valuation**
- Similar to standard leasehold valuation except leasehold enjoys reversion**
- Use of PV calculations to convert FV incomes and reversions using algebra,**
- PV factor tables, HP calculators and/or Excel spreadsheets**
- Consistent with the current DOR Appraisal Procedures Manual**

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II. Structuring the deal

A. County Economic Development Authority identifies a desirable employer who does a sale-and-leaseback of its real estate, paying rent for occupancy; bond interest rate is low-cost financing

B. Authority sells bonds and tenant takes obligation to pay the debt payments;

C. Upon maturity the tenant (former owner) gets property back for nominal payment.

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III. The early, long form model

A. Benefits to leasehold include

- 1. Any savings in occupancy costs due to rent obligations of tenant being less than the going market rents at the time**
- 2. The value at the end of the program of the property**

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B. Appraisal data to be gathered by appraisal staff includes

- 1. Conduct rent study to compare to bond payments;**
- 2. Develop supportable rent growth rate for duration of bond forecast period**

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- 3. Estimate current value of the fee simple estate, a supportable appreciation(depreciation) rate per market thinking, and likely fee simple reversion value to leasehold at end of bond period.**
- 4. Discount rate to convert future cash flows to Present Value**
- 5. All three approaches may be attempted**

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- **5. All three approaches may be attempted**
- **6. Values are developed for each January first of the bond term using DCF and, probably, a large spreadsheet. (One early spreadsheet was 24 columns by 78 rows)**

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- IV. The revised short form model**
- 1. With shorter term bond deals, the principal and interest payments wipe out any bargain in comparison to market rents, so**
 - 2. There is no “income” advantage, and**

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3. The entire benefit to the leasehold is in the reversion.
4. Data requirements are vastly reduced;
5. If reversion is stated as a nominal \$1 the PV calculations generate the “ramp-up” schedule. (See exhibit)

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DEMONSTRATION OF A RAMP-UP SCHEDULE
FOR ECONOMIC DEVELOPMENT BONDS

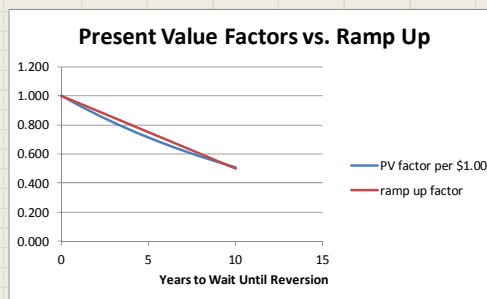
J D Vernor 12/30/2013

Using the formula $PV = FV / (1 + i)^n$
Executed by the Excel PV function

Input judgements:

Term (years) 10
Discount rate (%) 0.07

Years to wait until reversion	PV factor per \$1.00	ramp up factor
10	0.508	0.50
9	0.544	0.55
8	0.582	0.60
7	0.623	0.65
6	0.666	0.70
5	0.713	0.75
4	0.763	0.80
3	0.816	0.85
2	0.873	0.90
1	0.935	0.95
0	1.000	1.00



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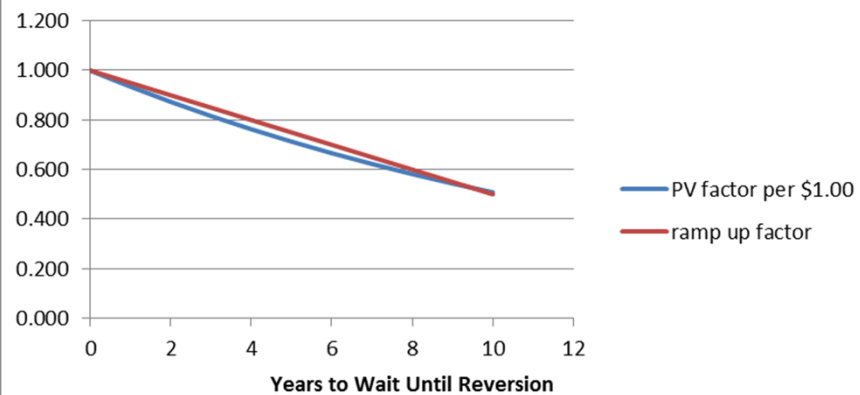
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Present Value Factors vs. Ramp Up



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- V. Evolution of doing the Math --
a two-minute history**
- A. Time Value of Money algebra**
- B. Tables of Six Functions based on the algebra**
- C. Financial calculators such as the Hewlett Packard 12C**
- D. Computer spreadsheet applications such as Excel**

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A. Time Value of Money algebra

Future Value of a Single Sum

The equation below calculates how large a single sum will become at the end of a specified period of time. This value is referred to as the future value (FV) of a single sum.

$$FV = PV(1 + i)^n$$

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$$FV = PV(1 + i)^n$$

Where: PV = Present Value
FV = Future Value
n = number of compounding periods
i = interest rate

BUT...what we want to show is...

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Present Value (PV) of a single sum
Rearranging to solve for the PV of a
single sum (such as a resale price
reversion) is fairly straight forward...

$$PV = FV / (1 + i)^n$$

This is the first way to present math;
Another way is--

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B. Tables of Six Functions based on the algebra

Six Functions of One Dollar						
For interest rate			7%	Annual compounding		
1	2	3	4	5	6	
Period	Future	Future	Sinking	Present	Present	Payment
	Value	Value of	Fund	Value	Value of	to
	of 1	1 ppd	Factor	of 1	1 ppd	Amortize
1	1.07000	1.00000	1.00000	0.93458	0.93458	1.07000
2	1.14490	2.07000	0.48309	0.87344	1.80802	0.55309
3	1.22504	3.21490	0.31105	0.81630	2.62432	0.38105
4	1.31080	4.43994	0.22523	0.76290	3.38721	0.29523
5	1.40255	5.75074	0.17389	0.71299	4.10020	0.24389
6	1.50073	7.15329	0.13980	0.66634	4.76654	0.20980
7	1.60578	8.65402	0.11555	0.62275	5.38929	0.18555
8	1.71819	10.25980	0.09747	0.58201	5.97130	0.16747
9	1.83846	11.97799	0.08349	0.54393	6.51523	0.15349
10	1.96715	13.81645	0.07238	0.50835	7.02358	0.14238
11	2.10485	15.78360	0.06336	0.47509	7.49867	0.13336
12	2.25219	17.88845	0.05590	0.44401	7.94269	0.12590
13	2.40985	20.14064	0.04965	0.41496	8.35765	0.11965
14	2.57853	22.55049	0.04434	0.38782	8.74547	0.11434
15	2.75903	25.12902	0.03979	0.36245	9.10791	0.10979
16	2.95216	27.88805	0.03586	0.33873	9.44665	0.10586
17	3.15882	30.84022	0.03243	0.31657	9.76322	0.10243
18	3.37993	33.99903	0.02941	0.29586	10.05909	0.09941
19	3.61653	37.37896	0.02675	0.27651	10.33560	0.09675
20	3.86968	40.99549	0.02439	0.25842	10.59401	0.09439

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C. Financial calculators such as the Hewlett Packard 12C:**f CLX 10 n 7 i 1.00 FV PV****Read .508**

This is applied to the appraised resale price when it is ten years into the future.

Each year a new resale price is estimated and discounted to PV over a term one year less.

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VI Important Cases/Law

1. W. C. Harris and Co. vs DeKalb BOTA, 1981, 288 Ga. 93, 701 S.E.2d 476

- **Considered a “foundation case”.**
- **Trial court found that a leasehold interest was taxable**
- **(BOA said it was fee simple—or, later, a usufruct under Allright Parking)**
- **and ...**

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BOE developed a formula for its valuation:

- **subtract value of LF from Value of FS to get VLH;**
- **GA superior court affirmed.**
- **Theory is out of favor by 2000.**
- **Decision goes on to define a 5+ years agreement as an estate for years.**

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Decision sets out requisite factors for credible appraisal:

- **Evidence that the simplified method follows an authorized income appraisal approach,**
- **That it takes into account the fair market value of similar leased property,**
- **Prevailing rents in the area, and that...**

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- **The value of the leasehold estate necessarily varies in accordance with the terms of the agreement,**
- **and the nature and location of the property.**

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- 2. OCGA 36-80-16.1(e) enacted 2009**
- indicates assessors may use simplified valuation methods for leaseholds that are not arbitrary or unreasonable
 - and that no one method is prescribed.
 - A 50% starting point must be demonstrated and not assumed.

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3. Macon Bibb County Board of Tax Assessor et al v. Atlantic Southeast Airlines, Inc. (1992), 262 Ga. 119, 414 S.E.2.d 635

The Superior court agreed the AWA held a usufruct in a hangar with office despite...

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- a 30-year lease, because
- it held severely restricted rights to use,
- it paid a monthly Service Payment (like property taxes),
- it could not sublet or assign, or post signs and
- it agreed to undertake an affirmative action program.

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4. SJC Properties, LLC v. Fulton County Board of Tax Assessors et al, S14A1493, Supreme Court of Georgia, March 27, 2015

- County Boards of Tax Assessors are not required to use any definite system or method, ...using the best information available....

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- **The 50% ramp-up formula is an analytically sound approach that comports with standard appraisal practice and**
- **“represents an appropriate, reasonable, and non-arbitrary method of arriving at the fair market value for tax purposes of the leasehold interest(s) at issue.”**
- **Quotes heavily from Harris.**

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5. Georgia Department of Revenue Appraisal Procedures Manual (APM)

- **“Discounted Cash Flow Analysis may be used to apply the income approach when the appraisal staff is valuing a lease and the residual value of the property at the end of the lease term.**

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- **“Each year’s income stream is discounted by applying a present–value factor to the cash flow expected for each year.**
- **“The estimated property value at the end of the lease term is also discounted.**
- **“The discounted amounts are summed resulting in an estimate of value for the property.”**

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VII Issues and challenges

- A. Taxpayer opposition groups will argue at the bond validation hearing that the ramp-up schedule is arbitrary**
- B. and the whole structure should be rejected;**

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**C. Frequently the bond obligor/
leaseholder purchases the issue;**

**D. he may have an option to prepay
but that terminates the tax savings.**

**Answer by explaining the model,
inputs, and defending the discount
rate choice.**

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**E. The long form model gave
prospective leaseholders many
bargaining points,**

**drawing out the process and
impacting the result.**

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Conclusion:

The State APM, Georgia law, several decisions, established appraisal industry methodology and the nature of available data lead to valuations that withstand bond validation hearing challenges.