APPRAISING PARTIAL INTERESTS

Life Estates
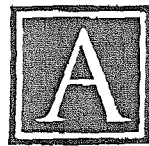
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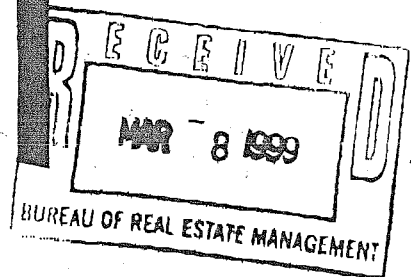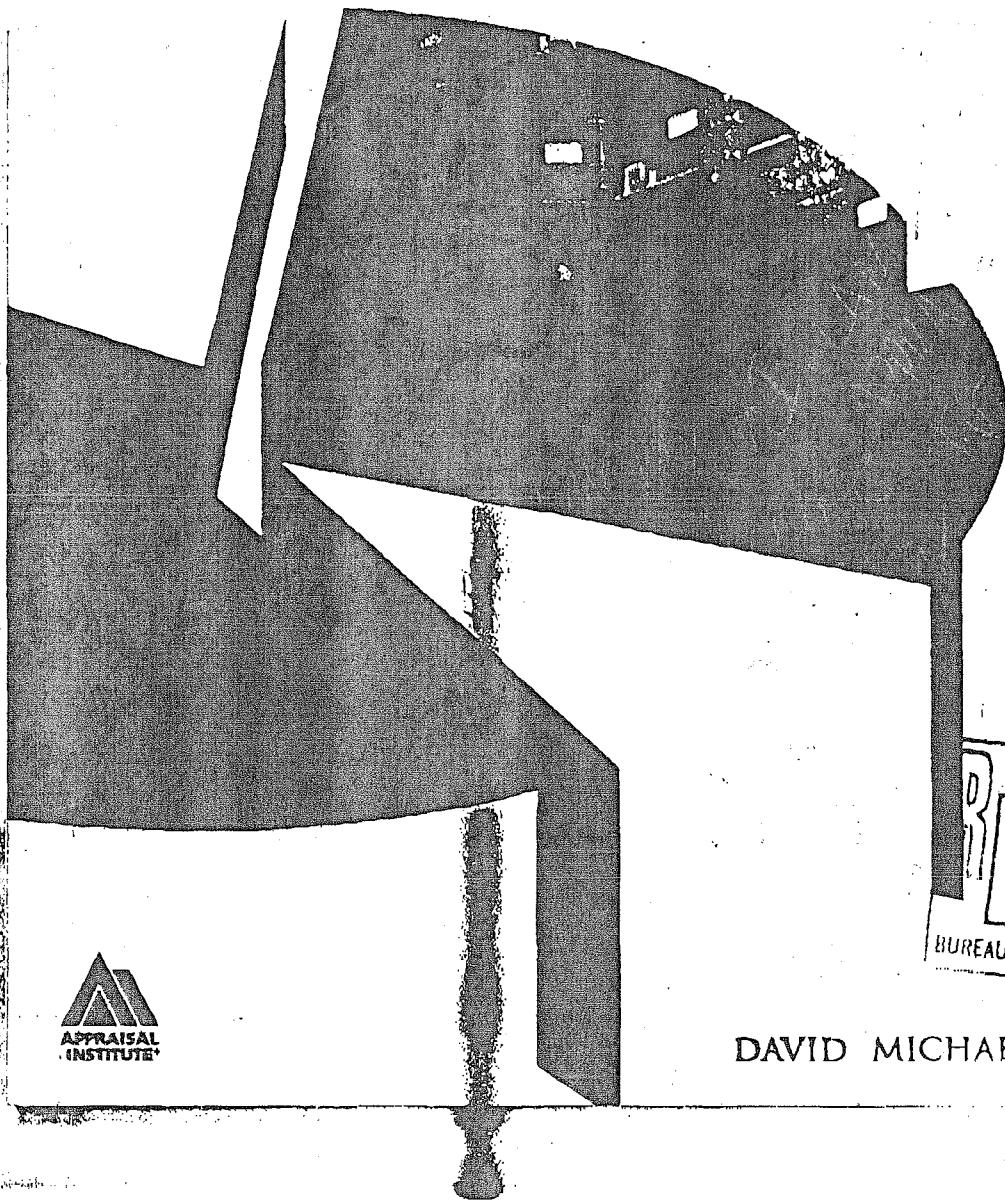
DAVID MICHAEL KEATING, MAI

CHAPTER FIVE

LIFE ESTATES

A life estate is a unique type of partial interest. In this form of estate, a designated beneficiary, the life tenant, has the right to use and occupy a parcel of real estate for the duration of his or her life. The life tenant generally enjoys this right without any obligation to pay rent, but typically he or she must maintain the property and pay all applicable liens and taxes. The owner of a real property encumbered by a life estate is called the *remainderman*; he or she enjoys the remaining rights to the property once the life tenant is deceased. A life estate is defined as follows:

> The total rights of use, occupancy and control, limited to the
> lifetime of a designated party.[1]

Figure 5.1 illustrates the rights associated with a life estate.

Figure 5.1 Rights Associated with a Life Estate

Remainderman:
Right of Future
Use and Reversion

Life Tenant:
Right of Use and
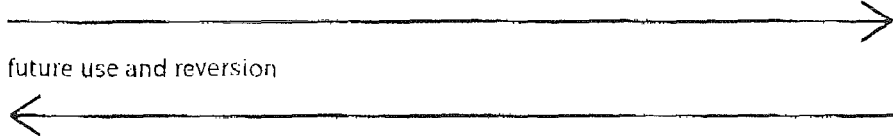*Occupancy for Life*
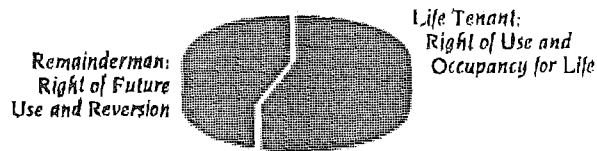
Not to scale, for illustration only

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1. Appraisal Institute, *The Dictionary of Real Estate Appraisal*, 3d ed. (Chicago: Appraisal Institute, 1993), 207-208.

Figure 5.1 Rights Associated with a Life Estate (continued)

Remainderman   *Life Tenant*
                                                    right of use and occupancy

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future use and reversion

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EXAMPLE 12

Assume a client requests the appraisal of a single-family home in an older, established neighborhood. The home was previously owned free and clear by Mr. Samuel Jones, who allowed his elderly sister, Patricia Sullivan, to live in it rent free. Her only obligations were to pay all applicable taxes and liens and to maintain the property in reasonably good condition, which she has gratefully done. Last year Mr. Jones passed away and, in his will, he left the home to his son, David. However, Jones granted a life estate to his sister to provide for her welfare after his death. The client is an attorney seeking an appraisal of the property to establish David's inheritance tax liability. Thus, the client is seeking the appraisal of a property encumbered by a life estate, i.e., the remainderman's position.

Solution

There are three steps involved in estimating the value of the remainderman's interest.

1. Estimate the most likely time of death of the life tenant.

2. Forecast the future value of the property at this time.

3. Discount the forecast future value of the property over the remaining duration of the life estate at the appropriate discount rate.

To estimate the most likely time of death of a life tenant, actuarial or statistical tables relating to life expectancy are referenced. Such tables can be found at the local library and on the Internet. One such table can be found in the *Statistical Abstract of the United States*, available at most libraries and over the Internet at http://www.census.gov/ftp/pub/statab/www/ under the Vital Statistics category. Table 5.1 is an excerpt from this source.

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Table 5.1 Expectation of Life in Years

Age In 1990	Total	White Male	White Female	Black Male	Black Female
At birth	75.5	72.9	79.6	64.6	73.8
50	29.2	26.9	31.8	22.7	28.3
51	28.3	26.0	30.9	22.0	27.5
52	27.4	25.2	30.0	21.3	26.7
53	26.6	24.4	29.1	20.6	25.9
54	25.8	23.5	28.2	19.9	25.1
55	24.9	22.7	27.3	19.3	24.3
56	24.1	21.9	26.5	18.6	23.6
57	23.3	21.1	25.6	18.0	22.8
58	22.5	20.4	24.8	17.4	22.1
59	21.8	19.6	24.0	16.8	21.3
60	21.0	18.9	23.1	16.2	20.6
61	20.2	18.1	22.3	15.6	19.9
62	19.5	17.4	21.5	15.0	19.2
63	18.8	16.7	20.7	14.4	18.5
64	18.1	16.0	20.0	13.9	17.8
65	17.4	15.4	19.2	13.4	17.2
70	14.0	12.3	15.5	10.9	14.1
75	11.1	9.5	12.1	8.7	11.2
80	8.4	7.2	9.1	6.7	8.6
85 and over	6.2	5.3	6.5	5.1	6.3

Source: *Statistical Abstract of the United States, 1994.* Table No. 116.

Note that the table indicates the average life expectancy actually increases for individuals who have already had a relatively long life. At birth the average predicted life expectancy is 75.5 years. However, for those individuals who have already reached 75 years of age, the predicted life expectancy is 86 years (75 years plus 11.1 years). Thus the table is exponential, not linear. For purposes of this example, assume the life tenant is a 75-year-old white female. As such, her life expectancy is 12.1 more years, indicating a predicted age of death of approximately 87 years.

The next step is to forecast the future value of the property at the predicted date of death. This is the most subjective part of the valuation of a life estate. Many appraisers estimate this value by first estimating the current market value of the property and then

adjusting for anticipated appreciation over the predicted remaining life of the tenant. For example, assuming the current value is $100,000, the predicted date of death is in 12.1 years, and the forecast rate of appreciation is 3% per year, the future value of the property would be $143,000, calculated as follows:

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

where:
FV = future value of property

PV = present (current) value of property

I = interest rate

n = predicted remaining life in years

Substituting numbers into the formula yields:

$$FV = \$100,000 (1 + 0.03)^{12.1}$$
$$= \$100,000 (1.03)^{12.1}$$
$$= \$100,000 (1.43)$$
$$= \$143,000$$

Once future value has been projected out at the anticipated rate of appreciation, it must be discounted back to present value. This may seem illogical, forecasting a future value and then discounting it back to present value again, especially when current value is already known. The procedure is necessary, however, because the current value of the property is an *unencumbered* value, and the appraisal assignment is to estimate an *encumbered* value— i.e., the value of a property encumbered by a life estate.

The appropriate discount rate to apply is a function of the property type, market conditions, and the expected date of death. A property in an established or growing neighborhood carries less risk than a property in a declining area that is already showing signs of blight or decay. Also, shorter life expectancies have less risk than longer life expectancies, just as the yield rate on a five-year treasury note is generally lower than the yield on a 30-year note (in periods of low inflation). In this example, the property is a single-family residence in a well-established, stable neighborhood, the remaining term is 12.1 years, and a 10% discount rate is applicable. The solution follows:

$$PV = FV/(1 + I)^n$$
$$= \$143,000/(1.10)^{12.1}$$
$$= \$143,000/3.1685$$
$$= \$45,132, \text{ or } \$45,000 \text{ rounded}$$

As can be seen, the remainderman's interest is valued at $45,000, much lower than the unencumbered fee simple value estimate of $100,000.

EXAMPLE 13

Consider the same information given in the preceding example, but now the appraisal problem is to estimate the value of the life estate, the interest enjoyed by the life tenant. Assume a survey of rent comparables reveals that the market rent for the home occupied by Patricia Sullivan would be $600 per month (if available for rent). Further research reveals rental rates are net, with the tenant responsible for utility and maintenance expenses as well as taxes and insurance. Therefore, as a result of the life estate granted her, Ms. Sullivan is currently enjoying a monthly benefit of $600. If market rents are forecast to increase at a rate of 3% per year over the remainder of her expected life, the value of her interest at a 10% discount rate can be calculated as shown in Table 5.2.

Table 5.2 Present Value of Life Estate

Year	Monthly Rent Savings	Annual Rent Savings	Present Value Factor at 10% Discount Rate	Present Value
1	$600.00	$7,200.00	0.9091	$6,545.52
2	$618.00	$7,416.00	0.8264	$6,128.58
3	$636.54	$7,638.48	0.7513	$5,738.79
4	$655.64	$7,867.68	0.6830	$5,373.63
5	$675.31	$8,103.72	0.6209	$5,031.60
6	$695.57	$8,346.84	0.5645	$4,711.79
7	$716.44	$8,597.28	0.5132	$4,412.12
8	$737.93	$8,855.16	0.4665	$4,130.93
9	$760.07	$9,120.84	0.4241	$3,868.15
10	$782.87	$9,394.44	0.3855	$3,621.56
11	$806.36	$9,676.32	0.3505	$3,391.55
12	$830.55	$9,966.60	0.3186	$3,175.36
12.1	$855.47	$1,026.56	0.3155	$323.88
				$56,453.46

The total present value of the life estate in this example is $56,453, rounded to $56,500.

Chapter Five

SUMMARY

In a life estate a designated party enjoys the right to use and occupy a parcel of real estate for the duration of his or her life. The party who enjoys this right is called the *life tenant* and the party who holds the remaining rights in the property is called the *remainderman*. Life estates are often granted to family members as a means of providing for their welfare; they are also used in estate planning.

To estimate the value of a life estate to the remainderman, the predicted remaining life of the tenant is first estimated using actuarial/statistical tables. Then the appraiser estimates the current value of the property and forecasts its future value at the end of the tenancy period. Finally, the forecast future value is discounted to the present at an appropriate discount rate.

To estimate the value of a life estate to the beneficiary, or life tenant, the predicted remaining life of the tenant is estimated based on actuarial/statistical tables. Then the rent savings to the tenant are estimated and discounted to present value at an appropriate discount rate.

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