

In simple terms, an appraisal is “the act or process of developing an opinion of value of an asset” (The Appraisal of Real Estate, 15th Edition). A self-storage appraisal is simply the economic model or methodology of developing an opinion of value. Appraisal has evolved as the asset class has become significantly more sophisticated in recent years. Therefore, the focus of this section is on key points to analyze when appraising or arriving at an opinion of value.

What’s Changed In The Last Year

The Federal Reserve has shown great determination to battle inflation with significant increases to the Federal Funds Rate. We can solve for a prior cap rate at a 5 percent interest rate, then solve for a current cap rate at a 6 percent interest rate as seen in Tables 15.1 and 15.2 below.

This modeling explains why self-storage cap rates lag interest rate increases; investors are willing to accept lower returns (dividend or cash on cash) on equity. As shown in the example, a 100 bp increase to the interest rate results in a 50 percent decrease

to the equity return. Investor underwriting has changed over the last year to include negative leverage, or a negative return in the first year or two of the holding period. As a result, cap rate and yield rate modeling has changed in Discounted Cash Flow analysis for the sector.

As shown in Table 15.3, the Valuation Matrix with a 7.75 percent shows a typical spread between the cap rate (5.00 percent) and yield rate approximal to the compound rate of growth of NOI. As more institutional investors from other sectors have entered self-storage, modeling for self-storage is reflecting other sectors that have a compressed yield rate and a higher terminal cap rate (75 bp spread to 5.00 percent cap rate) as shown in the Valuation Matrix with a 7.00 percent Internal Rate of Return (yield rate).

As demonstrated, the modeling is different, but the valuation indication does not change. These revisions reflect the market response to dynamic macro-economic conditions. Self-storage is a good hedge against inflation, and the R word for the

Table 15.1 – Band of Investment - 5.00% Interest Rate

Mortgage and Equity Assumptions

Loan to Value Ratio	65%
Interest Rate	5.00%
Amortization (Years)	30
Mortgage Constant	6%
Equity Ratio	35%
Equity Dividend Rate	3.00%

Weighted Average of Mortgage Equity Requirements

Mortgage Requirement	65% x 6.44% =	4.19%
Equity Requirement	35% x 3.00% =	1.05%
Indicated Capitalization Rate (Rounded)		5.24%

Compiled by Newmark

Table 15.2 – Band of Investment - 6.00% Interest Rate

Mortgage and Equity Assumptions

Loan to Value Ratio	65%
Interest Rate	6.00%
Amortization (Years)	30
Mortgage Constant	7%
Equity Ratio	35%
Equity Dividend Rate	1.60%

Weighted Average of Mortgage Equity Requirements

Mortgage Requirement	65% x 7.20% =	4.68%
Equity Requirement	35% x 1.60% =	0.56%
Indicated Capitalization Rate (Rounded)		5.24%

Compiled by Newmark

Table 15.3 – Valuation Matrix

Exit Cap.	Internal Rate of Return		
	7.50%	7.75%	8.00%
5.00%	\$12,680,863	\$12,431,381	\$12,187,788
5.25%	\$12,280,696	\$12,040,402	\$11,805,766
5.50%	\$11,916,908	\$11,684,967	\$11,458,473

General Cash Flow Assumptions

Valuation Scenario:	As Is
Investment Holding Period:	10 Years
Analysis Projection Period:	Years 1-11
Indicated Market Value (Rounded):	\$12,050,000
Cost of Sale	2.00%
Percentage Residual	64.94%
Indicated Market Value (\$/SF)	\$277.76

Compiled by Newmark

Table 15.4 – Valuation Matrix

Exit Cap.	Internal Rate of Return		
	6.75%	7.00%	7.25%
5.50%	\$12,646,914	\$12,397,726	\$12,154,443
5.75%	\$12,290,672	\$12,049,720	\$11,814,465
6.00%	\$11,964,116	\$11,730,715	\$11,502,818

General Cash Flow Assumptions

Valuation Scenario:	As Is
Investment Holding Period:	10 Years
Analysis Projection Period:	Years 1-11
Indicated Market Value (Rounded):	\$12,050,000
Cost of Sale	2.00%
Percentage Residual	64.89%
Indicated Market Value (\$/SF)	\$277.76

Compiled by Newmark

sector is not recession but resistance (to recession). As a result, more equity is still seeking to store capital in self-storage than product available. The Band of Investment reflecting a 50 bps increase in interest rates is presented on page 141.

Appraisal History

The economic concepts of value have been evolving for thousands of years, but the economic model of real estate appraisal was first codified in the 1930s by The American Institute of Real Estate Appraisers (now the Appraisal Institute) and the publication of the first edition of “The Appraisal of Real Estate” in 1951. The components of the valuation process can be outlined as:

- Identification of the Problem (for appraisal, usually identifying the assignment)
- Scope of Work Determination
- Data Collection and Property Description
- Data Analysis
- Application of the Approaches to Value

There are three specific approaches to value that reflect distinct methods of data analysis: the Cost Approach, the Sales Comparison Approach, and the Income Capitalization Approach. The use of two or three of these approaches are then reconciled into a final opinion of value. For self-storage, the primary investment criteria are based on cash flow. As a

are direct capitalization and the discounted cash flow (DCF) analysis.

The basis of an income forecast for valuation is in the market conditions of the subject trade area, the historical trends of the subject property, and comparable data. As to market conditions, a determination should be made if a trade area (often defined as a three-mile radius, but this can be tested by ZIP code studies of existing customers) is undersupplied, oversupplied, or at equilibrium. This can be done qualitatively by analyzing the occupancy of all the competition. For example, as a guide, a trade area that has occupancy in the 90 percent or more range might reasonably be considered undersupplied. Benchmarks, such as the total square feet of self-storage per person, can be compared in a particular trade area to data published in the *Self-Storage Almanac* or other resources. For example, the 2022 *Self-Storage Almanac* indicates a national average of 6.10 square feet per person, but the CBSA data indicates a range by CBSA (Core Based Statistical Area) from 3.27 square feet per person (New York-Newark-Jersey City, NY-NJ-PA CBSA) to 13.35 square feet per person in Boise City, ID CBSA. So, if occupancy is 90 percent, and the square feet per person is below the CBSA average and national average, a reasonable, qualitative conclusion may be undersupply. Quantitative models based on demographics and comparable data may rely on hedonic regression

Table 15.5 – Demand Forecast

	Total Population	% of Renters	Household Size (Avg.)	Average Household Income	Existing Supply (SF)	Existing Supply (SF) / Capita	Calculated Demand (SF) / Capita	Demand - Supply (SF) / Capita	Total Unsatisfied Demand (SF)
3-Miles Radius	200,439	49.4%	3.31	\$79,320	1,080,754	5.39	7.75	2.36	472,648

Source: Compiled by Newmark

result, the income capitalization approach is emphasized in self-storage valuation and will be analyzed first.

The Income Capitalization Approach

The income capitalization approach reflects the subject’s income-producing capabilities. This approach is based on the assumption that value is created by the expectation of benefits to be derived in the future. Specifically estimated is the amount an investor would be willing to pay to receive an income stream plus reversion value (resale) from a property over a period of time. The two common valuation techniques associated with the income capitalization approach

Table 15.6 – Self-Storage Market Equilibrium

Trade Area	3-Miles Radius
Existing Supply	1,080,754
New Construction	0
Total Supply	1,080,754
Less: Occupied Square Feet	-1,005,608
Available Supply	75,146
Less: Market Vacancy (10%)	-108,075
Subtotal (Remaining Supply)	-32,930
Unsatisfied Demand	472,648
Demand Less Remaining Supply	439,719
Equilibrium Forecast	Under-Supplied

Compiled by Newmark

models or simple algorithms to determine stabilized demand in a trade area and compare forecast demand to existing supply. An example is shown in Tables 15.5 and 15.6 on the opposite page.

In these examples, the trade area shows physical occupancy of 92 percent and existing supply of 5.39 square feet per person, suggesting undersupply. An econometric model quantifies and corroborates the qualitative model and reflects stabilized demand above the CBSA average of 4.79 square feet per person. This variance highlights the importance of trade area analysis.

As to historical trends, a review of the subject property financials is best. An example is presented in Table 15.7 below.

Notice the pattern of Effective Gross Income or EGI. From 2019 to 2020, it increased \$64,495, an increase

of 20.19 percent. From 2020 to 2021, EGI increased only \$616, or less than 0.10 percent. The trailing twelve months (TTM) is not as good an indicator as calendar years due to seasonality and can be skewed. Given this history, an increase of \$14,836 or 3.86 percent is concluded in the Year-1 Forecast.

This modeling underscores the importance of distinguishing between economic and physical vacancy. Due to rent loss or nonpayment, there is usually credit loss on top of physical vacancy. Plus, concessions for new move-ins increases economic occupancy over physical occupancy. However, in recent years complex revenue enhancement models (or the ability to raise rents on existing tenants) have offset much of the credit and concession loss. Typically, a revenue enhancement model will raise rents on an existing tenant from 7 percent to 9 percent within the first six months of occupancy (as shown in the robust 2020 growth in EGI).

Table 15.7 – Historical Revenue / Expense & Year Forecast

	2019 Actuals		2020 Actuals		2021 Actuals		Year 1 Forecast	
	Total	\$/SF	Total	\$/SF	Total	\$/SF	Total	\$/SF
Self-Storage Income								
Actual Rent (Occupied)	\$319,453	\$10.35	\$383,948	\$12.44	\$384,564	\$12.46	\$397,660	\$12.89
Plus Market Rent (Vacant)							\$1,740	\$0.06
Potential Self-Storage Income	\$319,453	\$10.35	\$383,948	\$12.44	\$384,564	\$12.46	\$399,400	\$12.94
Billboard & Cell Tower Income	\$31,431	1.02	\$30,473	0.99	\$32,439	1.05	35,004	1.13
Parking Income	\$0		\$0		\$0		20,052	0.65
Other Rental Income	\$0		\$0		\$0		0	
Ancillary Income	\$0		\$0		\$0		19,970	0.65
Total Potential Gross Income	\$350,884	\$11.37	\$414,421	\$13.43	\$417,003	\$13.51	\$474,426	\$15.37
Economic Vacancy							(\$37,954)	(\$1.23)
Effective Gross Income	\$350,884	\$11.37	\$414,421	\$13.43	\$417,003	\$13.51	\$436,472	\$14.14
Operating Expenses								
Real Estate Taxes	\$42,708	\$1.38	\$51,468	\$1.67	\$55,355	\$1.79	\$48,939	\$1.59
Property Insurance	\$3,676	0.12	\$4,026	0.13	\$4,091	0.13	4,200	0.14
Utilities	\$13,529	0.44	\$13,213	0.43	\$13,746	0.45	14,000	0.45
Repairs & Maintenance	\$8,356	0.27	\$4,439	0.14	\$4,711	0.15	9,000	0.29
Administration	\$9,332	0.30	\$14,582	0.47	\$18,447	0.60	14,500	0.47
Off-Site Management (% of EGI)	\$0		\$0		\$0		21,824	0.71
On-Site Management	\$67,788	2.20	\$89,780	2.91	\$73,716	2.39	70,000	2.27
Advertising	\$801	0.03	\$0		\$0		5,000	0.16
Miscellaneous	\$0		\$0		\$0		250	0.01
Ground Lease	\$0		\$0		\$0		0	
Total Operating Expenses	\$146,190	\$4.74	\$177,508	\$5.75	\$170,066	\$5.51	\$187,713	\$6.08
<i>Expense Ratio</i>	<i>41.66%</i>		<i>42.83%</i>		<i>40.78%</i>		<i>43.01%</i>	
Net Operating Income	\$204,694	\$6.63	\$236,913	\$7.68	\$246,937	\$8.00	\$248,759	\$8.06

Source: Compiled by Newmark

Section 15 • Self-Storage Valuation

Another test of reasonableness to forecasting collected income or EGI is the Cost of Occupancy (COO). The COO is the average annual rent of a unit (total rent collected divided by occupied units) compared to average annual household income. In general, a ratio near 2 percent suggests rent upside. Alternatively, a ratio above 3.5 percent suggests less upside. In this case, the COO is 1.58 percent, suggesting continued upside in collected rents. As one person noted, some people spend more on coffee than the COO of a self-storage unit. So, who would bother to spend a Saturday moving out of a unit for a savings of 7 percent to 9 percent?

Operating expenses historically at the subject property should be compared to national data, such as the *Self-Storage Expense Guidebook* (also published by Modern Storage Media) and expense comparables. Data should be analyzed by square footage and as a ratio of EGI. An example is presented in Table 15.8 below.

The data indicates that the subject expenses as a \$/SF are high and as a ratio are close to the indicated range. It is important to note that in this case, real estate taxes are forecast to increase substantially due to local

taxation laws and the definition of market value that assumes a sale. Real estate taxes have been rising in the sector, so a careful review of data and local taxation ordinances are warranted. Similarly, insurance and advertising costs have been rising in the sector and should be carefully considered when forecasting into the future. Now that a year-one forecast is concluded, a direct capitalization and yield capitalization are appropriate and shown in Tables 15.9 on the opposite page, 15.10 on page 146, and 15.11 on page 147.

- **Relationships** - A 10-year discounted cash flow model is the primary decision maker in over 85 percent of investors surveyed. (Please visit www.modernstoragemedia.com to see published Investors Surveys). As outlined earlier, this is because of the increasing sophistication of the self-storage sector. It accounts for both cash flow (equity dividend) and appreciation (yield) during a typical 10-year holding period.
- The relationship of the cap rate and Internal Rate of Return (IRR) or discount rate should be

Table 15.8 – Expense Comparables

	National	West Pacific	Comp 1 City Of CA	Comp 1 City Of Industry, CA	Comp 2 Upland, CA	Comp 3 Glendora, CA	2017 Actuals	2018 Actuals	2019 Actuals	Stable Year Forecast
Units	618	701	707	791	316	520				318
Rentable SF	68,405	69,286	69,698	79,105	30,410	54,815				30,860
Expense Year	2019	2019	2019	2019	2019	2020				Year 1
Income										
Effective Gross Income	\$13.75	\$15.65	\$18.84	\$17.36	\$11.54	\$18.79	\$11.37	\$13.43	\$13.51	\$14.14
Operating Expenses										
Real Estate Taxes	\$1.41	\$1.13	\$1.33	\$2.60	\$1.40	\$1.56	\$1.38	\$1.67	\$1.79	\$1.59
Property Insurance	\$0.23	\$0.33	\$0.30	0.33	0.12	0.35	\$0.12	\$0.13	\$0.13	\$0.14
Utilities	\$0.34	\$0.34	\$0.28	0.16	0.44	0.28	\$0.44	\$0.43	\$0.45	\$0.45
Repairs & Maintenance	\$0.47	\$0.53	\$0.44	0.30	0.27	0.47	\$0.27	\$0.14	\$0.15	\$0.29
Administration	\$0.61	\$0.75	\$0.59	0.47	0.31	0.59	\$0.30	\$0.47	\$0.60	\$0.47
Off-Site Management	\$0.76	\$0.89	\$0.99	1.08	0.00	1.08				\$0.71
On-Site Management	\$1.06	\$1.22	\$1.45	1.00	2.23	1.67	\$2.20	\$2.91	\$2.39	\$2.27
Advertising	\$0.29	\$0.30	\$0.37	0.23	0.03	0.31	\$0.03			\$0.16
Miscellaneous	\$0.58	\$1.00	-\$0.03	0.00	0.00	0.00				\$0.01
Ground Lease				0.00	0.00	0.00				\$0.00
Total Operating Expenses	\$5.75	\$6.48	\$5.72	\$6.17	\$4.81	\$6.32	\$4.74	\$5.75	\$5.51	\$6.08
Operating Expense Ratio	41.79%	41.40%	30.40%	35.51%	41.66%	33.63%	41.66%	42.83%	40.78%	43.01%
Off-Site Management (% of EGI)	5.51%	5.68%	5.24%	6.22%	0.00%	5.77%				5.00%

Source: Compiled by Newmark

within 50 basis points of the compound rate of the net operating income during the holding period. In this example, the net operating income is forecast to increase at 3.19 percent. With a cap rate of 5.5 percent, an IRR of 8.25 percent is within the 50 bps parameter. Alternatively, since last year, a compressed IRR can be used with an increased terminal cap rate.

- As a test of reasonableness, the relationship of cash flow to appreciation can be examined. In this example, the reversion or appreciation component represents 59 percent of total value, with the balance being attributed to cash flow. In an ideal market, the balance is 50 percent/50 percent. But in appreciating sectors and markets like this self-storage example, the reversion or appreciation component may be as much as 65 percent. Conversely, in down markets, the cash flow may be emphasized as much as 65 percent with only 35 percent of total value being attributable to appreciation.

The Sales Comparison Approach

The sales comparison approach utilizes sales of comparable properties, adjusted for differences, to indicate a value for the subject. Valuation is typically accomplished using physical units of comparison such as price per square foot or economic units of comparison such as the effective gross income multiplier. Adjustments are applied to the property units of comparison derived from the comparable sale. The unit of comparison chosen for the subject is then used to yield a total value.

- **Unit of Analysis** - The appropriate unit for comparison in the sales comparison approach is the price per square foot of rentable area. For self-storage, the price per unit can be easily skewed due to variances in unit mix. For example, a price per unit analysis shows a higher range. Therefore, the price per square foot of rentable area is considered most credible.
- **Economic Characteristics** - One of the most under-utilized adjustments particular to self-storage is economics characteristics. Since cash flow is the driver of investment decisions in the asset class, economic characteristics should be among the most important adjustments. Economic characteristics include attributes associated with a trade area beyond the

location adjustment. For self-storage, this adjustment considers whether the conditions of the comparable trade area can be classified as oversupplied, under-supplied, or at equilibrium. Net operating income per square foot can be one benchmark tool; however, it is not a mathematical relationship and must be used with great care. Another measure of this variable relates to unit rent. For example, the operation of the business generates the net operating income applied to the real estate. In general, there is a correlation between higher rent and higher value. As a result, an adjustment for economic conditions is considered. Unfortunately, precise data and a direct relationship are difficult to

Table 15.9 – Direct Capitalization Method

Summary of Stabilized Net Operating Income		Year 1
Item Description	\$ / SF	Total \$
Self-Storage Income		
Actual Rent (Occupied)	\$12.89	\$397,660
Plus Market Rent (Vacant)	\$0.06	\$1,740
Potential Self-Storage Income	\$12.94	\$399,400
Billboard & Cell Tower Income	1.13	35,004
Parking Income	0.65	20,052
Other Rental Income	-	0
Ancillary Income	0.65	19,970
Total Potential Gross Income	\$15.37	\$474,426
Economic Vacancy	8% (\$1.23)	(\$37,954)
Effective Gross Income	\$14.14	\$436,472
Operating Expenses		
Real Estate Taxes	\$1.59	\$48,939
Property Insurance	0.14	4,200
Utilities	0.45	14,000
Repairs & Maintenance	0.29	9,000
Administration	0.47	14,500
Off-Site Management (% of EGI)	0.71	21,824
On-Site Management	2.27	70,000
Advertising	0.16	5,000
Miscellaneous	0.01	250
Ground Lease	-	0
Total Operating Expenses	\$6.08	\$187,713
Expense Ratio		43.01%
Net Operating Income	\$8.06	\$248,759
OAR		5.50%
Indicated Market Value 'As Is'		\$4,522,898
Indicated Market Value 'As Is' (Rounded)		\$4,500,000
	Price/SF	\$145.82

Source: Compiled by Newmark

Table 15.10 – Income Capitalization Approach

Discounted Cash Flow Summary	1	2	3	4	5	6	7	8	9	10	11	CAGR
Self-Storage Income												
Actual Rent (Occupied)	\$397,660	\$409,590	\$421,878	\$434,534	\$447,570	\$460,997	\$474,827	\$489,072	\$503,744	\$518,856	\$534,422	3.00%
Plus Market Rent (Vacant)	\$1,740	\$1,792	\$1,846	\$1,901	\$1,958	\$2,017	\$2,078	\$2,140	\$2,204	\$2,270	\$2,338	3.00%
Potential Self-Storage Income	\$399,400	\$411,382	\$423,724	\$436,435	\$449,528	\$463,014	\$476,905	\$491,212	\$505,948	\$521,127	\$536,760	3.00%
Billboard & Cell Tower Income	35,004	36,054	37,136	38,250	39,397	40,579	41,796	43,050	44,342	45,672	47,042	3.00%
Parking Income	20,052	20,654	21,273	21,911	22,569	23,246	23,943	24,661	25,401	26,163	26,948	3.00%
Other Rental Income	0	0	0	0	0	0	0	0	0	0	0	0
Ancillary Income	19,970	20,569	21,186	21,822	22,476	23,151	23,845	24,561	25,297	26,056	26,838	3.00%
Total Potential Gross Income	\$474,426	\$488,659	\$503,319	\$518,418	\$533,971	\$549,990	\$566,490	\$583,484	\$600,989	\$619,018	\$637,589	3.00%
Economic Vacancy	(\$37,954)	(\$39,093)	(\$40,265)	(\$41,473)	(\$42,718)	(\$43,999)	(\$45,319)	(\$46,679)	(\$48,079)	(\$49,521)	(\$51,007)	3.00%
Effective Gross Income	\$436,472	\$449,566	\$463,053	\$476,945	\$491,253	\$505,991	\$521,170	\$536,806	\$552,910	\$569,497	\$586,582	3.00%
Operating Expenses												
Real Estate Taxes	\$48,939	\$49,918	\$50,916	\$51,934	\$52,973	\$54,033	\$55,113	\$56,216	\$57,340	\$58,487	\$59,656	2.00%
Property Insurance	4,200	4,326	4,456	4,589	4,727	4,869	5,015	5,165	5,320	5,480	5,644	3.00%
Utilities	14,000	14,420	14,853	15,298	15,757	16,230	16,717	17,218	17,735	18,267	18,815	3.00%
Repairs & Maintenance	9,000	9,270	9,548	9,835	10,130	10,433	10,746	11,069	11,401	11,743	12,095	3.00%
Administration	14,500	14,935	15,383	15,845	16,320	16,809	17,314	17,833	18,368	18,919	19,487	3.00%
Off-Site Management (% of EGI)	21,824	22,478	23,153	23,847	24,563	25,300	26,059	26,840	27,645	28,475	29,329	3.00%
On-Site Management	70,000	72,100	74,263	76,491	78,786	81,149	83,584	86,091	88,674	91,334	94,074	3.00%
Advertising	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720	3.00%
Miscellaneous	250	258	265	273	281	290	299	307	317	326	336	3.00%
Ground Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Operating Expenses	\$187,713	\$192,855	\$198,141	\$203,576	\$209,164	\$214,909	\$220,816	\$226,890	\$233,134	\$239,555	\$246,157	2.75%
Net Operating Income	\$248,759	\$256,712	\$264,912	\$273,369	\$282,089	\$291,081	\$300,354	\$309,916	\$319,776	\$329,942	\$340,425	3.19%
Capital Expenditure												
Replacement Reserves (% of EGI)	\$4,365	\$4,496	\$4,631	\$4,769	\$4,913	\$5,060	\$5,212	\$5,368	\$5,529	\$5,695	\$5,866	3.00%
Near Term Capital Expenditure	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0
Total Capital Expenditure	\$4,365	\$4,496	\$4,631	\$4,769	\$4,913	\$5,060	\$5,212	\$5,368	\$5,529	\$5,695	\$5,866	
Cash Flow	\$244,395	\$252,216	\$260,282	\$268,599	\$277,176	\$286,021	\$295,142	\$304,548	\$314,246	\$324,247	\$334,560	3.19%
KPIs												
Rent Growth (Income in place)		3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Rent Growth (Market)		3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Other Income Growth		3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Economic Vacancy	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
Expense Growth		3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Ground Lease		3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%

Source: Compiled by Newmark

isolate. Looking at net operating income as a benchmark, and considering the other adjustments, an adjustment can be derived.

- **Adjustment Summary** - The total range of adjustments should always decline after the adjustment process, or what is the point of the exercise? In the following example, the range is narrowed from 90 percent to 15 percent. An example is presented in Table 15.12 below.
- **Effective Gross Income Multiplier (EGIM)** - The EGIM tests the reasonableness of the forecast year-one cash flow to the concluded cap rate. Using the formula 1-expense ratio/EGIM (or value divided by effective gross income), expense ratios can be compared to concluded cap rates. In general, the lower the expense ratio the higher the cap rate.
- **Secondary Approach** - For self-storage, the sales comparison approach is secondary. Because of the emphasis and impact of cash flow and relatively low sales volume in many markets, the price elasticity of self-storage can be very large. As previously discussed, the market emphasizes cash flow and the income approach significantly more than the sales comparison approach.

The Cost Approach

The cost approach is based on the proposition that the informed purchaser would pay no more for the subject than the cost to produce a substitute property with equivalent utility. This approach is particularly applicable when the property being appraised involves relatively new improvements that represent the highest and best use of the land or when it is improved with relatively unique or specialized improvements for which there exist few sales or rents of comparable properties.

- **Applicable and Relevant** - The cost approach is best used for newer properties due to the challenges of estimating depreciation. However, some lenders want an estimate of remaining economic life to ensure the building is economically viable during the amortization period of a loan. This can create challenges and highest and best use questions of a self-storage property. Some investors like to purchase below replacement cost, but this metric can be difficult to quantify due to the wide range of replacement cost estimates, particularly as costs are currently fluctuating due to supply chain problems. Therefore, the applicability and the relevance of the

cost approach warrants careful consideration to a credible opinion of value.

- **Land Valuation** - Self-storage land can be difficult to entitle or obtain zoning approval. Municipalities prefer other property types that generate more jobs or retail sales tax revenue. Therefore, if land sales utilized in an appraisal are not purchased and entitled for self-storage, the land component of self-storage can be undervalued. In general, self-storage land approximates a range of 10 percent to 40 percent of total property value but is typically in a narrower range of 25 percent to 35 percent.
- A cost approach for self-storage typically represents a value upon completion. Depending upon the local market, it may be appropriate to add absorption costs for stabilization (rent loss and some profit for time during lease-up).

These guidelines can help a layperson review an opinion of value. Self-storage is a unique asset class, and an opinion of value should carefully review and consider these characteristics. If reviewing a value conclusion, these points can be utilized to consider the credibility of an opinion of value.

Table 15.11 – Valuation Matrix			
Exit Cap.	Internal Rate of Return		
	8.00%	8.25%	8.50%
5.50%	\$4,669,220	\$4,583,135	\$4,499,046
5.75%	\$4,547,062	\$4,463,769	\$4,382,403
6.00%	\$4,435,085	\$4,354,351	\$4,275,480
General Cash Flow Assumptions			
Valuation Scenario:	As Is		
Cash Flow Start Date:	9/4/2020		
Investment Holding Period:	10 Years		
Analysis Projection Period:	Years 1 - 11		
Indicated Market Value (Rounded)	\$4,500,000		
Cost of Sale	2.00%		
Percentage Residual	59%		
Indicated Market Value (\$/SF)	\$145.82		

Compiled by Newmark

Table 15.12 – Sales Adjustment Summary			
Price Per Square Foot	Low	High	Average
Unadjusted Range	\$108.33	\$172.47	\$131.38
Adjusted Range	\$135.41	\$155.23	\$143.02
Concluded Improved Sale Indication (S/SF)			\$143.00

Source: Compiled by Newmark