MULTIFAMILY COMPS

STATVAL™

Automate Income Capitalization Method for Multifamily Underwriting

Summary: The 2021 Multifamily Market experienced record transaction volume, high loan origination, low interest rates, high rent growth, and sustained CAP Rate compression. Now 3 months into 2022, inflation is at 40-year highs and interest rates are 150 basis points higher than Dec 2021 lows with expectations of multiple Fed Rate hikes over the next 9 months. This introduces high uncertainty into operating performance and changes the math when underwriting transactions. A core component for underwriting Multifamily assets is credible application of the Income Capitalization Valuation Method. The required work may entail review of an existing appraisal, internal data compilation and analysis, or both. Either way it takes time and money. The Multifamily Comps (MFC) Statistical Valuation (STATVAL™) Application provides an automated and cost-effective method to perform a Benchmark Underwriting using the Income Capitalization Method in a manner that utilizes verifiable data, is fully transparent, and statistically matches underwriting assumptions used to calculate DSCR and LTV on documented Loan Originations. Once the Subject Property has been entered into STATVAL™, a Benchmark Underwriting may be executed in as little as 5-10 minutes and cost as little as $200-$300 per Property for Clients who take advantage of volume pricing discounts.

Database: The MFC Database is comprised of 45,000+ Lender Underwritten Financials and Appraised Values, and 150,000+ serialized Operating Statements extracted from Agency Multifamily CMBS Offering Circulars and Trustee Reports. The data starts in 2009 and are updated monthly when new CMBS data is released. The primary database concentration is Garden style apartments serving middle income households. The database also includes significant groupings of Mid-Rise, High-Rise, Senior, Healthcare, Student, and Manufactured Housing. While CMBS data has been available for decades from major vendors such as Bloomberg, Trepp, and Intex, these legacy CMBS formats do not facilitate statistical research, advanced analytics, and automation. MFC has implemented proprietary software to extract, cleanse, and process raw CMBS data files in formats that facilitate these more advanced data analyses and automation. MFC data processing includes serialization of property-level operating statements, geo-mapping to Tract-Level US Census data, creation a property-level demographic profiles, and calculation of affordability categories.

Income Capitalization Method: The Income Capitalization Method requires that the Appraiser or Underwriter generate a projection-year Operating Statement and Capitalization Rate for the Subject Property which is credibly supported by credible Comp data. STATVAL™ automates this process by 1) selecting Comps from the MFC Database which are similar to the Subject Property with respect to location, subtype, number of units, building age, demographics, and affordability, and 2) generating statistical estimates for the underwritten revenue, expenses, and CAP Rate which (based on the most recent origination data) we would expect an Agency Underwriter to use for Loan-to-Value (LTV) and Debt Service Coverage Ratios (DSCR) for a newly originated loan. The Statistical Valuation estimate is the MFC automated valuation calculation which we refer to as STATVAL™. The output data from these automated calculations is presented to the User in an Interactive Underwriting Worksheet that enables the Appraiser or Underwriter to interactively toggle assumptions and compare Subject Property projection-year Operating Statement Line-Items and CAP rate to 1) the Subject Property's Trailing Operating Statement, 2) line-item Comp Data, and 3) the STATVAL™ Benchmark Ranges. The Worksheet also provides an Interactive Loan Calculator whereby the User may either 1) input DSCR and LTV ratios and calculate Maximum Loan Balance, or 2) input Loan Balance and calculate DSCR and LTV ratios. In both cases, the Loan Calculator also computes the Levered Income Return that Owner would expect to generate on the Equity Investment. All data and analytics generated by STATVAL™ is provided as a 1-year subscription with monthly updates to all Comp data and statistical calculations. The Client may recalculate analyses using updated data at any time during the 1-yr subscription period.

Steps, Speed, Cost: The first step for using STATVAL™ is to input the Subject Property descriptive data and trailing Operating Statement in the STATVAL™ application. To the extent that an appraisal, previous valuation, or outstanding loan data is available, the User may also input this data as well. Upon inputting Subject Property data, STATVAL™ automatically geo-maps the Subject Property to tract-level US Census data, generates a demographic profile, calculates all financial ratios, and saves all input and calculated data to the segregated Client Property Data Tables**. This usage of the STATVAL™ application is free-of-charge and provides the Client a high-functioning database for Portfolio Assets, Acquisition Candidates, and/or Loan Candidates whereby the Client may recall, review, edit, and recalculate any Property at any time, and perform line-items comparisons to other previously saved Properties. Once a Client Property has been saved to Client Property Data Table, the Client may perform the Income Capitalization Underwriting described in the prior paragraph in as little as 5-10 minutes and at a cost of $200-$300 per Property for Clients who take advantage of volume pricing discounts.

All Client Property Data is saved on segregated data tables for the exclusive usage by the respective Client and specifically NOT co-mingled with the broader MFC Database or made available to other Clients.

Payment System: Unlike other systems with costly annual license fees, MFC charges for individual data and analyses on a per-use basis. This means that each Client pays for only the data and analyses they need and at the time they need it. A data purchase may be as little as 1-year subscription to data on one individual unmasked Comp, or a full Underwriting on a Property, or a download on masked Comp Data for an entire market (e.g., 10,419 Properties in West Region). To simplify accounting and invoicing for both parties, the MFC Systems uses pre-purchased Comp Credits as the currency for STATVAL™ data and analyses. Clients may pre-purchase Comp Credits at substantial volume discounts with the purchase proceeds added to monthly invoice amounts. Unused Comp Credits may be redeemed or sold to other Clients in exchange for reduction in their outstanding invoice. This payment system means that Clients may utilize STATVAL™ as much or as little as desired and pay accordingly. There is not minimum payment obligation for having the application on your desktop, and (as discussed in the paragraph above) there is no charge for Clients to input and maintain Properties on the MFC Client Property Data Tables.

Exbibits, Contact: The Exhibit Section of this document shows example screenshots of various STATVAL™ output reports as well as other information about the MFC Database and Company. For further information, demos, and/or to set up a STATVAL™ User Account please contact our sales representatives:

Web Hughes, Director of Business Development
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1. Example Subject Property Input

Subject Property Input

Provided by Client and/or MFC Database

SUBJECT PROPERTY, NAME, ADDRESS, ATTRIBUTES	
PROPERTY NAME	BROADSTONE LTD
Address	305 WEST COMMERCE STREET
City	DALLAS
State (abbrev)	TX
Zip	75208
County	DALLAS
Year Built	2017
Year Renov	2017
Number of Units	308
SubType	GARDEN

APPRAISAL AND UNDERWRITTEN FINANCIALS (OPTIONAL)	
VALUATION DATE	10/1/2019
VALUATION	$60,000,000
UW OCCUP	95%
UW REVENUE	$5,319,138
UW EXPENSES	$2,670,203
UW CAPEX	$72,000
UW CAPRATE	4.41%

TRAILING OPERATING STATEMENT	
STATEMENTENDDATE	12/31/2021
OCCUP	94.0%
GROSRNT	$5,512,379
VACANCY LOSS	-$530,497
LAUNDRY	$0
PARKING	$12,670
OTHERIN	$400,265
RETAXES	$1,233,831
PROPINS	$133,123
UTILITI	$238,166
REPAIRS	$218,003
MANAGEM	$133,586
PAYROLL	$557,827
MARKETI	$184,521
PROFESS	$0
GENERAL	$165,833
OTHEREX	$0
GROUNDR	$0
CAPEX	$64,064

2. Automated Geo-Mapping to Census Data and Demographic Profiles

Subject Property Geo-Mapped to Tract-Level Census Data

STATVAL generates an Automated Demographic Profile for each Client Input and Database Property by Geo-Mapping the Property location to Tract-Level US Census Data.

BENCHMARK COMPARISONS	CLIENT PROPERTY	1ST QUARTILE	MEDIAN	4TH QUARTILE	CLIENT VS MEDIAN
Year Built	2017	1995	2003	2015	14
Year Built-Renov	2017	2010	2014	2016	3
Num Units	308	299	336	348	-28
Population PerSqMile	1,705	3,923	6,809	10,591	-5,104
Median HomeVal	$115,300	$188,800	$339,600	$445,800	-$224,300
Median HHInc	$58,711	$47,554	$58,586	$74,694	$125
Median Age	33.5	30.9	33.4	34.7	0.1
Median Rent	$1,458	$967	$1,256	$1,413	$202
Median Owner Costs	$283	$1,587	$2,239	$2,800	-$1,956
Renter PCT	69.5%	66.5%	77.9%	88.4%	-8.4%
Rent Over30pct HHInc PCT	44.9%	31.9%	36.6%	49.8%	8.3%
Bachelors Degree PCT	33.2%	26.1%	46.4%	62.3%	-13.2%
Unemployment PCT	4.2%	2.9%	5.5%	8.4%	-1.3%
Mgt Finance Job PCT	24.4%	19.5%	25.1%	36.3%	-0.7%
MovedIn After2010 PCT	68.9%	68.9%	78.3%	83.2%	-9.4%

➢ Subject Property Demographic Profile is used for Automated Comp Selection and Statistical Valuation Estimates.

➢ Table shows the Subject Property alongside the Median and Quartiles of Competitive Properties Selected by STATVAL Algorithms.

➢ Low Population Density, Median Home Values, and Owner Costs in Property-Level Census Tract indicate Transitional Neighborhood

3. Operating Statement Benchmarks

Operating Statement Benchmarks

STATVAL Benchmarks Operating Performance by Comparing the Subject Property Operating Statement Line-Items to Median and Quartiles of Competitive Properties Selected by STATVAL Algorithms
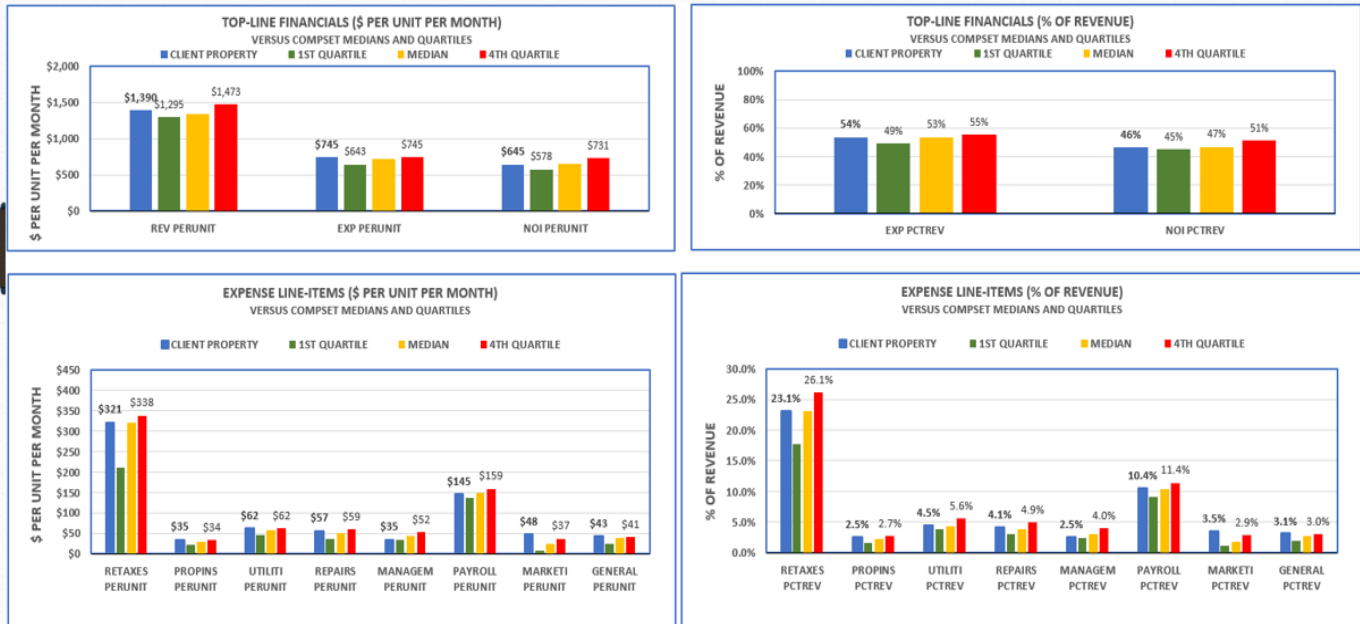
4. Statistical Valuation (STATVAL™)

Statistical Valuation

STATVAL employs Proprietary AI to statistically estimate Benchmark Ranges for the CAP Rate and Projection Year Operating Statement that an Appraiser or Underwriter would use to apply the Income Capitalization Method to Value the Subject Property. The training set for STATVAL AI is the MFC database of 45,000+ Lender Underwritings and Appraised Values and 150,000+ serialized Operating Statements.

STATVAL COMPARISONS	STATVAL BENCHMARK RANGE			TRAILING FINANCIALS	CLIENT VALUATION	STATVAL VS TRAILING	STATVAL VS CLIENT VAL	OBSERVATIONS
VALUATION TYPE	LOW	STATVAL	HIGH		APPRAISAL			
VALUATION DATE		12/31/2021			10/1/2019		2 years, 2 months since most recent appraisal	
VALUATION	$53,216,209	$58,013,707	$63,870,151		$60,000,000		-$1,986,293	-3.31 % estimated lower value
VALUATION_PERUNIT	$172,780	$188,356	$207,371		$194,805		-$6,449	$-6449 less value per unit
UW_CAPRATE	3.96%	4.36%	4.75%		4.41%		-0.06%	-6 basis points lower CAP Rate
STATEMENTTYPE	STATVAL PROJECTION YEAR FINANCIALS			TRAILING	CLIENT UW	VS TRAILING	VS CLIENT UW	
STATEMENTENDDATE		12/31/2022		12/31/2021	10/1/2020			
UW OCCUP	93.2%	94.1%	95.0%	94.0%	95.0%	0.1%	5.5%	STATVAL is 3.3% lower value that pre-COVID 10/1/2019 Appraisal. The lower value is primarily attributable to higher actual and underwritten expenses since that time.
UW REV PERUNIT	$1,435	$1,463	$1,492	$1,460	$1,439	$4	$24	
UW EXP PERUNIT	$738	$779	$821	$775	$722	$4	$57	
UW NOI PERUNIT	$657	$684	$711	$685	$717	-$1	-$33	
UW EXP PCTREV	50.4%	53.3%	56.1%	53.1%	50.2%	0.2%	3.1%	
UW NOI PCTREV	44.9%	46.7%	48.6%	46.9%	49.8%	-0.2%	-3.1%	

5. MFC Database

A core component of the Multifamily Comps (MFC) Statistical Valuation System (STATVAL) is proprietary software that extracts and repurposes raw CMBS files for Advanced Statistics and Automated Property-Level Analytics .

Multifamily Comps Database

- ➢ 45,000+ Appraised Values and Underwritten Financials and 150,000+ serialized Operating Statements extracted from CMBS Offering Circulars and Trustee Reports

- ➢ Primary concentration is Garden style apartments serving middle income households. Also includes significant groupings of Mid-Rise, High-Rise, Senior, Healthcare, Student, and Manufactured Housing.

- ➢ Integrated with Tract-Level Census Data used to calculate Demographic Profiles for each Database and Client Property

- ➢ Includes range of Affordability Categories consistent with FHFA and ESG mandates.

6. Executive Team

EXECUTIVE TEAM
Institutional Real Estate, CMBS, Advanced Quantitative Expertise

Webster Hughes, PhD, Co-Founder, Managing Member, Multifamily Comps LLC

- ➢ Responsibilities: Product Development, System Architecture, Software, IP, Business Development, Client Analytics
- ➢ Background: Hughes started his career with a PhD in Mathematical Physics Princeton University and two major scientific publications while in his early twenties. In 1986, Dr. Hughes left academia and joined Salomon Brothers to develop the first generation of valuation and risk models for Mortgage-Backed Securities. Subsequent positions include Senior Managing Director at Bear Stearns, Managing Director First Union Capital Markets, and Proprietary Consultant to Bank of America. For the past decade, Hughes' work has been focused extensively on Freddie Mac Multifamily CMBS Investments. This work led to consulting projects using the Freddie Mac Multifamily Data and then to Multifamily Comps LLC.
- ➢ Contact: 704-200-6305

John Baczewski, CPA, CRE, Co-Founder, Member, Multifamily Comps LLC

- ➢ Responsibilities: Institutional Real Estate Expertise, Product Development, Business Development
- ➢ Background: Baczewski founded and for the past 16 years has served as President of Real Estate Fiduciary Services LLC (REFS), an independent provider of fiduciary services and strategic consulting to institutional investors. Previously, Mr. Baczewski worked in senior institutional real estate investment, finance, and operating positions, as well as 10 years of Big Four public accounting. Mr. Baczewski has served in numerous industry associations including as Chairman of the Institutional Real Estate Reporting Standards Board sponsored by National Council of Real Estate Investment Fiduciaries (NCREIF) and Pension Real Estate Association (PREA). In 2017, Mr. Baczewski contracted with Dr. Hughes to use the Freddie Mac Multifamily Data to perform Operating Performance Benchmark Analyses for several large institutional clients. This business launched Multifamily Comps LLC.
- ➢ Contact: 978-887-3750

7. Tabular Output of Interactive Underwriting Worksheet

COMP SET COMPARISON REPORT	CLIENT UW PROJECTION	STATVAL BENCHMARK RANGE			1ST QUARTILE	MEDIAN	4TH QUARTILE	PROJECTED VS STATVAL	PROJECTED VS MEDIAN
Year Built	2000				1996	2004	2017		-4
Year Built-Renov	2018				2016	2017	2018		1
Num Units	318				252	271	352		47
Population PerSqMile	2,329				2,318	2,976	3,866		-647
Median HomeVal	$164,810				$168,800	$199,500	$221,200		-$34,690
Median HHInc	$65,396				$68,476	$68,997	$71,875		-$3,601
Median Age	34.2				28.7	31.5	35.4		2.7
Median Rent	$1,201				$1,148	$1,204	$1,232		-$3
Median Owner Costs	$1,188				$1,303	$1,366	$1,451		-$178
Renter PCT	71.6%				37.2%	64.1%	72.9%		7.5%
Rent Over30pct HHInc PCT	30.6%				27.2%	31.5%	37.3%		-0.9%
Bachelors Degree PCT	42.1%				36.4%	38.8%	55.9%		3.3%
Unemployment PCT	4.7%				2.2%	3.9%	4.6%		0.8%
Mgt Finance Job PCT	23.7%				25.4%	27.1%	35.2%		-3.4%
MovedIn After2010 PCT	76.8%				58.9%	68.5%	75.4%		8.3%
VALUATION TYPE	PROJECTION	LOW	STATVAL	HIGH	COMPSET VALUATION RANGE			VS STATVAL	VS COMPSET M
VALUATION DATE	12/31/2021		12/31/2021		12/31/2020	12/31/2021	12/31/2021		
VALUATION_PERUNIT	$201,059	$153,178	$165,534	$175,712	$175,929	$177,857	$189,254	$35,525	$23,202
UW_REV PERUNIT	$1,208	$1,100	$1,118	$1,137	$1,142	$1,183	$1,377	$89	$25
UW_EXP PERUNIT	$454	$453	$470	$487	$403	$457	$581	-$16	-$3
UW_NOI PERUNIT	$754	$647	$649	$650	$681	$756	$877	$105	-$2
UW_CAPRATE	4.50%	4.38%	4.70%	5.02%	4.52%	4.82%	5.06%	-0.20%	-0.32%
STATEMENT TYPE	PROJECTION		TRAILING		COMPSET OPERATING STATEMENT RANGE			VS TRAILING	VS COMPSET M
STATEMENTENDDATE	12/31/2022		12/31/2020		12/31/2020	12/31/2021	12/31/2021		
OCCUP	95.9%		95.9%		94.0%	95.0%	97.0%		0.9%
REV PERUNIT	$1,208		$1,117		$1,132	$1,192	$1,343	$91	$16
EXP PERUNIT	$454		$475		$406	$460	$536	-$22	-$6
NOI PERUNIT	$754		$641		$681	$743	$804	$113	$11
CAPEX PERUNIT	$18		$17		$17	$17	$23	$1	$1
EXP PCTREV	37.6%		42.6%		37.5%	38.4%	41.0%	-5.0%	-0.8%
NOI PCTREV	62.4%		57.4%		59.0%	60.5%	62.5%	5.0%	1.9%
CAPEX PCTREV	1.5%		1.5%		1.2%	1.4%	2.2%	0.0%	0.0%
BASERNT PCTREV	91.1%		91.1%		88.4%	89.3%	92.3%	0.0%	1.8%
OTHERIN PCTREV	8.9%		8.9%		9.2%	9.5%	15.6%	0.0%	-0.7%
RETAXES PCTREV	9.2%		9.4%		8.9%	9.1%	10.0%	-0.2%	0.1%
PROPINS PCTREV	1.4%		1.5%		1.4%	1.6%	2.3%	0.0%	-0.1%
UTILITI PCTREV	6.5%		6.9%		4.7%	5.5%	5.8%	-0.4%	1.0%
REPAIRS PCTREV	5.9%		6.0%		3.5%	4.3%	6.0%	-0.1%	1.6%
MANAGEM PCTREV	2.9%		3.0%		2.7%	3.0%	3.0%	-0.1%	-0.1%
PAYROLL PCTREV	6.5%		10.6%		8.8%	9.3%	10.5%	-4.1%	-2.8%
MARKETI PCTREV	1.3%		1.3%		0.9%	1.0%	1.6%	0.0%	0.2%
GENERAL PCTREV	3.6%		3.7%		1.8%	2.3%	2.6%	-0.1%	1.3%
OTHEREX PCTREV	0.1%		0.1%		0.1%	0.2%	0.4%	0.0%	-0.1%
BASERNT PERUNIT	$1,100		$1,017		$1,010	$1,064	$1,244	$83	$36
OTHERIN PERUNIT	$107		$99		$113	$117	$172	$8	-$10
RETAXES PERUNIT	$112		$105		$103	$105	$137	$6	$6
PROPINS PERUNIT	$17		$16		$17	$21	$26	$1	-$3
UTILITI PERUNIT	$79		$77		$54	$65	$73	$2	$14
REPAIRS PERUNIT	$72		$67		$47	$59	$65	$4	$12
MANAGEM PERUNIT	$36		$33		$32	$33	$40	$2	$2
PAYROLL PERUNIT	$79		$119		$100	$109	$124	-$40	-$30
MARKETI PERUNIT	$15		$14		$12	$13	$18	$1	$2
GENERAL PERUNIT	$44		$41		$22	$30	$35	$3	$14
OTHEREX PERUNIT	$2		$2		$1	$2	$5	$0	-$1

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