THE ROLE OF MARKET FEASIBILITY IN MULTI-FAMILY INVESTMENT: LESSONS LEARNED FROM FOUR CASE STUDIES

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by

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ABSTRACT

This thesis addresses the market research portion of multi-family investment analysis. Four low-income housing tax credit properties within The Boston Financial Group's Section 42 portfolio were case studied; two were in the Kansas City metro area and two were in the Detroit metro area. They provided adequate market experience and performance history from which to the author could: 1) create a framework for analyzing potential multi-family investments; 2) retrace and critique the scope and findings of BFG's original research relying on the benefit of hind sight; and 3) assimilate the findings and conclusions into a series of recommendations/"lessons learned" that can be generalized to future multi-family investment analysis. Analysis tools specific to low-income housing tax credit projects are noted accordingly.

The findings, conclusions, and recommendations about the feasibility and positioning of each sub market and project were distinct enough to provide diverse lessons to be taken to future investment. Demand and supply conditions were evaluated and overlaid throughout the research. From a feasibility perspective, the Kansas City and Detroit metro markets can be distinguished as low-risk and high-risk housing markets, respectively; the four respective sub markets (Platte County, Missouri; Johnson County, Kansas; Oakland County, Michigan; and Macomb County, Michigan) were concluded to be: under supplied, slightly over supplied, at equilibrium, and generally over supplied with multi-family product. From a positioning perspective, findings included: non-competitive locations, local market conditions too affluent to provide an adequate source of renter demand; poorly assessed existing supply; and programs too heavily weighted with one unit type. Recommendations for future investment focus on tracking long-term supply and demand trends, assessing volatility and direction of job and housing growth, drawing conclusions about supply and demand imbalances, comparing sub market income trends to metro income trends, and comparing sub market supply to comparable and subject site building programs.

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Introduction

The importance of thorough market analysis cannot be overlooked as the basis for sound underwriting and proforma development. Given the current popularity of finance as a field of study, proformae are demystified when viewed as the projection of market assumptions driven off of a building program at time zero into the future. Individuals that manipulate numbers on a regular basis seem to hold a healthy recognition of their limitations, admitting that they can be made to tell any story and predict any predetermined outcome.

In this sense, a project can fall into performing or non-performing categories simply based on the standards and expectations applied to it. For instance, over aggressive revenue and expense assumptions can qualify a project for what would constitute insupportable debt under a more conservative set of assumptions. Market research should inductively aim to be to build assumptions through supply and demand conditions evident within the subject marketplace. While the future is certain to change in ways both unanticipated and unaccounted for in analysis; the scrutinous up-front investment in market research can lead to fewer surprises, better-informed investment decisions and a better characterization of risk from the outset.

The purpose of this thesis is to present the primary market issues relevant to multi-family investment decisions and their subsequent performance. To this end, a feasibility and positioning framework are proposed by the author. They conceptualize research into the decision of whether to build/invest and into what is the most appropriate product and for which market segment? Feasibility assesses the depth of demand and supply in an attempt to identify imbalances. Positioning analysis assesses the character of demand and supply in an attempt to identify niches of

unfilled demand. In combination, these two components provide the adequate information from which to build realistic proformae and assess a project's risk profile based available information gathered in and about the market area.

Four market research and underwriting packages, on projects in which the Boston Financial Group (BFG) invested, were analyzed to provide actual market experience and performance history from which to: 1) create a framework for analyzing potential multi-family investments; 2) retrace and critique the scope and findings of BFG's original research relying on the benefit of hind sight; and 3) assimilate the findings and conclusions into a series of recommendations/"lessons learned" that can be generalized to future multi-family investment analysis.

As both the underwriter of this research and one of the nation's largest public syndicators of low-income tax credit, multi-family projects, BFG's role in a typical deal, a low-income housing tax credit (LIHTC) program overview, market issues specific to LIHTC projects, and an introduction to the four projects case studied are set forth in Chapter One. Chapter Two proposes a "Feasibility Framework" to be applied to four case studies. It presents the data, theory, and analysis requirements behind evaluating an area's feasibility. Chapters Three and Four apply the framework presented in Chapter Two and utilize the findings as a basis for evaluating the original feasibility sections of the four case studies. Chapter Three focuses on the metropolitan-level analysis and Chapter Four on sub-market level analysis. Similar in structure to the feasibility section, Chapter Five introduces a "Positioning Framework" to be applied to four case studies. Chapters Six and Seven apply the framework presented in Chapter Five and utilize the findings as a basis for evaluating the original positioning sections of the four case studies. Chapter Six

analyzes public-data source information and Chapter Seven analyzes qualitative field-data information. Chapter Eight extracts and expands upon those findings revealed and conclusions drawn in prior chapters and presents a section of "lessons learned" from the research that can be generalized into BFG's future multi-family investment analysis.

Chapter One

BFG & LIHTC Context

The Boston Financial Group (BFG) is one of the five largest public syndicators LIHTC projects in the United States. In 1992, they invested approximately $120 million dollars of equity in approximately 75 deals, representing about six percent of the approximate $2.1 billion of equity invested in LIHTC projects nation wide. BFG's primary competitors include: Boston Capital, The Related Companies, The Richmond Group, and NAPICO.

1.1 LIHTC Program Overview

The LIHTC program was created by the Tax Reform Act 1986 as the only non-subsidy investment incentive for the production of affordable housing. The intention was to replace many of the tax incentives that TRA '86 eliminated by making low-income projects economically feasible for developers and economically attractive to individual and corporate investors. The objective of the LIHTC program is to ease developers' financing burdens to build or rehabilitate affordable units through the provision of the equity value of the tax credits-- a dollar for dollar reduction in annual tax burdens.

The program's administration responsibilities have been delegated to individual states, therefore, the application process, schedule, and allocation criteria varies by state. Each state's allocation is uniformly determined by population, where currently the annual allocation ratio (volume cap) is 1.25, or five tax credits per four citizens. The demand for the credits varies from state to state, and ranges from virtual disuse (in states like West Virginia, Oklahoma, West Virginia, and Alaska) to demand that far exceeds supply (by over four and one-half times the

allotted credits in Rhode Island). Unused credits can be carried over into the subsequent year; however, any carried-over credits still unused in the subsequent year are returned to the national pool and redistributed to "high demand" states according to need.

The reduced financing burden to developers is contingent upon their providing below-market rents for income-qualified households. Income qualification is determined by a household[1] earning at or below a certain percentage of a metropolitan area's median income (as determined annually by HUD). The percentage of median household income applied to a project is determined by the "set-aside election, which can be selected by the developer as one of two options at the time of filling the application for credits:

- "20/50 projects" 20 percent of units are set aside for tenants earning 50 percent or less of the area's median income; or
- "40/60 projects--" 40 percent of the units are set aside for tenants earning 60 percent or less of the area's median income (called 40/60 projects).

In both cases, the 50 or 60 percent of median household income is applied to a four-person household. Adjustments of plus or minus ten percent of the applicable four-person percentage (50 or 60 percent) are added or subtracted for larger or smaller household sizes, respectively.[2] The following example calculates gross maximum income and gross maximum rents in a four-person household under the two set-aside elections:

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[1] Adjusted for household size.

[2] The 40/60 election would therefore result in the following applied percentages per household size: 42% for a one-person household, 48% per a two-person household, 54% percent for a three-person household, and 60% person household. The 20/50 election would result in the following applied percentages: 35% for a one-person household, 40% per a two-person household, 45% percent for a three-person household, and 50% person household.

Sample 4 Person Household	20/50 Election	40/60 Election	% Difference
Area's Median HH Income	$42,000	$42,000	
Set-Aside Allowance	x 50%	x 60%	
Maximum Allowable Income	**$21,000**	**$25,200**	**Δ 20.0%**
% of Income	x 30%	x 30%	
Annual Gross Rent	$7,000	$7,560	
Mo. Gross Rent	**$583**	**$630**	**Δ 8.1%**
Utility Allowance	-$50	-$50	
Mo. Adjusted Rent	**$553**	**$580**	**Δ 4.8%**

The 20/50 election allows for the lower rents (approximately 8.1 percent) of the two scenarios, while additionally lowering the income ceiling (by approximately 20 percent). In contrast, 40/60 arrangement produces higher rents and raises the maximum income ceiling.

While BFG typically becomes involved in projects after the developer has elected the set-aside, the decision can be viewed as a positioning device in the sense that the election could potentially define the size of the demand pool and effect a project's performance. Since sub markets vary in their affluence relative the metro area's median income, lower income areas (relative to their respective metro areas), whose maximum Section 42 rents exceed market rents may capture a deeper market under a 20/50 election, whereas higher income areas (relative to the metro area) may capture a deeper market under a 40/60 election, since a large percentage of the household base can potentially be overqualified to rent. Therefore, evaluation of whether the developer's election was favorable should be considered.

Prior to 1990, gross maximum rent levels were determined by the number of occupants living in the unit. In 1990, the regulations changed such that the gross maximum rent levels for projects that received credits in 1990 or later became based on the number of bedrooms per unit rather than the number of occupants (with the standard assumption of 1.5 occupants per bedroom). For example, under the 1990 regulations, a two-bedroom unit housing only two eligible tenants would be considered to be occupied by three tenants (two bedrooms multiplied by the standard of 1.5 occupants per household), whereas under the prior regulation, the maximum rent would have been lower, since it strictly counted the number of occupants. Therefore, when generalized, the new regulation produces higher rents in projects whose household sizes average less than 1.5 occupants per bedroom; conversely, the new regulation produces lower rents in projects whose household sizes average greater than 1.5 occupants per bedroom.

A project only receives tax credits for that percentage of units occupied by qualified tenants. Median-income determinations for the areas are made by HUD on an annual basis. Once occupied and receiving credits, a strict set of compliance regulation must be followed. They include:

- maximum rent levels based upon median household income and unit size;
- required and/or agreed upon percentages of set-aside low-income units;
- occupancy of rent-restricted units by income-eligible tenants; and
- the absence of the project's foreclosure.

Breach in compliance can result in a determination of "non-compliance," where some portion of issued credits are recaptured. Lastly, participating tenants must be re-certified annually, with income increases allowed up to 140 percent of the tenant's original qualifying income.

1.2 BFG's Typical Deal

At the point of having been approved under the LIHTC program, developers have the option of either retaining the tax-credit benefits for themselves or selling the credits directly to individuals or corporations. The majority opt to sell the credits to syndicators, whose business is that of purchasing the tax credits for investors.

BFG's involvement begins after developers have been competitively awarded some number of tax credits from a state. The tenor of the market as well as BFG's need for new projects determines what percentage of partnerships originate from the developers initiative and what percentage originate from BFG's/other syndicators' initiatives.

The earliest stage of BFG's research is largely fact finding, when a review of the developer's credit-allocation schedule, proformae with anticipated financing arrangements, and the development team information are reviewed. Where market areas are unfamiliar, site visits are initiated. Developers' appraisal's and any in-house market research is also reviewed where available. The data is processed through BFG's in-house model to assess the viability of the deal. Two of three deals drop out by this stage of analysis. The primary reasons for a deal's failure to qualify include: unreasonable proformae expectations, permanent financing arrangements obtained for fewer 15 years; and inexperienced or unsophisticated development teams.

Viable deals continue to the proposal stage, where the deal points are outlined from BFG's perspective. The main considerations at this stage of a project's research are price, the division and priority of annual and future cash flow, the pay-in schedule to the developer, and developer guarantees. The proposal's typical terms include: 1) BFG paying 47¢ to 49¢ per tax credit; 2) BFG's fund of investors having priority over the on their minority of share of their cash flow; 3)

the tax credits being allotted to BFG; and 4) the developer assuming unlimited guarantees that are linked to the pay-in schedule until the point of project completion.

Approximately 25 to 50 percent of BFG's funds are transferred to the developer on the day a deal is admitted. Subsequent shares are paid out at key performance intervals, i.e., at construction completion, the final closing, six-months of break-even, and a 1.10 debt-service coverage ratio. BFG's capital obligations do not extend beyond their initial capital requirements. Consulting and asset management fees are contingent upon a supply of new deals being accepted.

Upon acceptance of the proposal, the due-diligence process leading up to the investment committee decision follows. As one of a number of components included in the investment committee package, the feasibility portion of the research is typically conducted by BFG's in-house consulting group. For a typical Table of Contents of an investment committee package, see Appendix A. The consulting group's role in the process is the assessment of feasibility and the validation of the building program. While only one in ten deals drop out at this stage of the process; most are adjusted. Typical adjustments are changes to partnership and deal structuring rather than changes to the building template.

The preliminary investment package is presented to a screening committee, typically comprised of the consulting staff member working on the project and a group of Senior Investment Bankers. Occasionally Asset Management is represented. The meeting serves as a "dry run," critiquing the deal, strengthening weak points, and polishing presentation in preparation for the Investment Committee review, which typically follows screening within a week.

The Committee's members include representation from the executive ranks, Investment Real Estate, Asset Management, and Consulting. The session is viewed as an opportunity to apply the individual competencies from the different parts of the company, rather than as an approve or deny investment in the deal. This is seen in the fact that only a handful of deals in years have ever been denied at the investment committee meeting stage. Their by-product is a list of "subject-tos," or preconditions to BFG's approval of investment into their portfolio.

1.3 Market Issues Specific to the LIHTC Program

Most of the market issues affecting LIHTC projects are similar to those affecting market rate projects. The primary differences relate to qualifying and assessing demand.

Since HUD's median income estimates for the entire metropolitan area are applied to LIHTC development in all sub markets throughout the metro area, the disparity between metro and sub market income levels is an important consideration in a project's investment. Sub markets with higher median incomes relative to the metro area will produce higher rent advantages for LIHTC projects when compared to market-rate projects because the project's competition and attainable rents will reflect local rather than metro income dynamics; however, this advantage noted in higher-income sub markets can and is often out weighed by: 1) the local pool of traffic being largely over qualified to rent at the subject property, given local demographics; and 2) higher proportional building costs accompanying higher income sub markets. The difference between metro and sub market median-income levels is particular to LIHTC projects. In addition, the percentage of income-qualified households is an important consideration in assessing the depth of the pool of the local qualified demand, since given the employment-driven nature of rental product, it is unrealistic to assume that demand for the project will derive from the outside of the local market area.

Lastly, household sizes are critical an important issue in those LIHTC projects which received their credits prior to 1990 (when maximum rents were determined by number of occupants). Over estimated household sizes lead to over estimated gross scheduled income, where actual income is some fraction of anticipated income. Therefore, household size research can avoid poorly assessed supportable debt.

1.4 Overview of the Four Projects Case Studied

BFG selected the four LIHTC projects that were case studied. They include: Willow Lake; Leawood Manor; Woodlake Hills; and Oakview Square. All demand and supply research and conclusions related to their feasibility and positioning are based on information available at the time of the investment decision. For instance, none of the research benefits from the findings of the 1990 Census. A brief synopsis of each project follows as a framework for their future reference.

Willow Lake. Located in Platte County, Missouri, Willow Lake lies on the northern side of the Kansas City metro area. Built with a 50/50 mix of one and two bedroom units, the 132-unit project is the only of the four projects evaluated that was built and operating as a Section 42 project prior to BFG'S investment. Due diligence on the project was conducted in November of 1989, at which time asking rents averaged below both market and maximum Section 42 rents

Leawood Manor. Located in Johnson County, Missouri, Leawood Manor lies on the south side of the Kansas City metro area. The 253-unit project mix includes: 26 one-bedroom units; 200 two-bedroom units; and 26 three-bedroom units. At the time of investment consideration, the to-be built project qualified for 1989 tax credits. BFG's due diligence was conducted in July of 1989. Proposed proforma rents were at the Section 42 maximum, which averaged below market rents.

Woodlake Hills. Located in Oakland County, Michigan, Woodlake Hills lies on the northeastern side of the Detroit metro area. The 144-unit project mix includes: 12 one-bedroom units and 122 two-bedroom units. The to-be built project qualified for 1990 tax credits. BFG's due diligence was conducted in October of 1990. Proposed pro forma rents were at the Section 42 maximum, and averaged below market rents.

Oakview Square. Located in Macomb County, Michigan, Oakview Square lies on the northwestern side of the Detroit metro area. The 192-unit project mix includes: 20 one-bedroom units and 172 two-bedroom units. The to-be built project had qualified for 1989 tax credits. BFG's due diligence was conducted in November of 1989. This is the only project for which the feasibility component was conducted by Real Estate Research Corporation (RERC), an outside consulting agency. Proposed pro forma rents were at the Section 42 maximum, and averaged below market rents.

Chapter Two

Feasibility Framework

This chapter explores the theory, data, and analysis requirements behind evaluating a project's feasibility. The application to specific projects is withheld until Chapters Three and Four, which geographically divide the research into metropolitan and sub-market analysis. While BFG's involvement in investment proposals is typically solicited at the stage where a developer has been approved for credits to construct a new project; some percentage of deals arise from existing projects that need rehabilitation or capital infusions. The decision to invest in both new or existing projects requires an assessment of market feasibility.

The prescribed approach outlined in this chapter maintains that the most important considerations to residential feasibility include the measurement of: 1) historical and recent metropolitan-level demand and supply trends, including their volatility over time, and 3) their direction of growth toward or away from the sub market under consideration.

To this end, the feasibility component incorporates the analysis of longer-term trends over a wider geographic area to formulate conclusions about demand and supply imbalances, their predictability over time, and their pattern of growth. Thus, metropolitan trends are evaluated over a long enough period of time to cover a complete market cycle (25 years +). While sub-market trends review a shorter, approximate ten-year period, this research maintains that sub markets' relative and changing capture of the metro area is of predominant importance rather than long-term trending or volatility. The analysis is structured from a macro (metropolitan) to micro (sub market) perspective to support the framework for capture analysis on the sub market level.

The data sources recommended throughout this research were selected for their quality and consistency, frequent publication, modest cost, and ease of manipulation. All data except sub-market employment trends are available through national governmental sources and can be accessed from a library with a government publications department, purchased inexpensively, and/or efficiently maintained on an in-house data base.

2.1 Demand and Supply Conditions

Indicators divide into stock and flow variables. Stock variables measure the size of the base and are often used to benchmark growth trends. Flow variables measure additions or growth. In essence, flow variables considered over a long period of time can be used as stock variables against shorter-term trends. Stock and flow variables can represent demand or supply. Demand for residential product is purely represented by households that physically occupy housing units. Supply is represented by the houses that people inhabit.

2.1.1 Demand Conditions

Assessing the stock and flow variables on the demand side is clouded by the fact that household figures are published though the approximation of population figures at ten-year census intervals. Other potential proxies for measuring demand are population and employment. The infrequency with which population figures are published dilutes population's effectiveness at assessing changes in demand. *Total employment*, which is published on a monthly basis, has proven to statistically correlate more closely to household formation than population.

Therefore, for the purposes of this research, employment (rather than population) is used as the driving indicator of housing demand: *total employment* is the stock variable that serves to measure existing demand and *employment growth* is the flow variable that serves to measure new demand. Both total employment and employment growth can be more closely related to the demand for rental product by distinguishing between industry sectors.

Total employment is tracked both by "place of work" (Current Employment Series: CES) and by "place of residence" (Current Population Series: CPS). The former, also called "at place employment," is a more accurate depiction of the location of actual jobs than is employment tracked by place of residence. The divergence between the two series is particularly notable on the sub-market level, where the magnitude of employment is largely overstated in counties "specializing" in housing-- with a majority of people commuters outside of the sub market to their jobs-- and conversely understated in counties "specializing" in jobs-- with a majority of people commuting into the sub market for jobs. On the metropolitan level (where sub markets are aggregated and the majority of all housing and jobs are included), the inaccuracies cancel one another out and the two series become largely interchangeable.

Both work and residence series are gathered and tabulated on the local level by each state's office of employment security. The Texas Employment Commission (TEC) and the Michigan Employment Security Commission (MESC) are two examples of such state departments. Employment figures published by local chambers of commerce, economic development agencies, and national data sources, such as the National Planning Data Corporation (NPDC) derive from one of these two series.

The CPS specifically tracks total employment, the number and percent unemployed, and total labor force on a monthly basis from metropolitan and individual county level down to the township and city level. It is not available broken out by industry sector. The CES series tracks both total employment as well as employment distributed by industry sector on a monthly basis, but only for metropolitan areas and counties, not specific cities. Because of the inaccuracies associated with the CPS on a sub market (county) level, and the unavailability of the CES on the city and township level, micro level employment statistics are difficult to assess.

The Bureau of Economic Analysis' (BEA) Department of Regional Measurement collects the CES series nationally for all metropolitan areas and counties and the Bureau of Labor Statistics (BLS) collects the CPS series nationally for all metro areas and counties. Both are available by the national source at an approximate-two month delay. Therefore, requesting the data earlier at the state employment security office is typically preferable, unless the data is being collected for a number of metropolitan areas in different states.

Often local Councils of Government or regional planning agencies collect the various data for their area to build economic and demographic projections. Two examples of such agencies include: Southern California Association of Governments (SCAG) and the Southeast Michigan Council of Governments (SEMCOG). Their projections typically incorporate and make assumptions about local factors shaping growth, like infrastructure constraints and the regulatory environment.

The absolute number of jobs added relative to the total employment base over time provides a sense of relative scale and timing of an area's job growth. Some areas experienced the majority of their employment growth in the 1950s and 1960s and are today losing jobs. Others experienced their greatest growth in the 1980s. The information is useful to characterizing the depth and timing of historic demand. Examples across metropolitan areas follow:

Metro Area	Total Emp. Growth	Emp. Growth 1960-1970	% of Total 1960-1970	Emp. Growth 1970-1980	% of Total 1970-1980	Emp. Growth 1980-1989	% of Total 1980-1989
Chicago, CMSA	931,681	480,498	52%	167,100	18%	284,083	30%
Cleveland, CMSA	236,244	166,300	70%	52,433	23%	17,511	7%
Detroit-Ann Arbor, CMSA	687,137	465,887	68%	154,052	22%	67,198	10%
Kansas City CMSA	379,152	126,130	33%	119,983	32%	133,039	35%
Minneapolis, CMSA	769,702	235,314	31%	266,079	35%	268,309	35%
Pittsburgh, CMSA	118,195	82,883	70%	69,787	59%	-34,475	-29%

Note that Cleveland, Detroit, and Pittsburgh grew earlier, and that their employment growth has been tapering off since the 1960s. Pittsburgh's actually became negative in the 1980s. All three cities are driven by manufacturing industries and have not successfully been able to transition into new industries. One the other hand, Minneapolis and Kansas City, which have never been dominated by one industry, have grown steadily over time. Lastly, in Chicago (where employment tapered off in the 1970s and rebounded in the 1980s) is an example of a city with a strong industrial history of manufacturing that was able to diversify its base in the 1980s into industries that could effectively compensate for declining pick up the slack in job growth in other sectors. Today, Chicago is considered to have a stable and expansive base that is not determined by any one industry.

The notion of risk and stability can be assessed by examining the amount that trends have fluctuated over time. The relationship of a trend line's standard deviation relative to its mean[3] (coefficient of variation) assesses an area's relative risk/volatility. Standard deviations and means of percentage in employment between 1960-1989 follow to illustrate the range of values across metro areas:

[3] Mean = average.

Metro Area	STD on % Employment Growth	Mean on % Employment Growth	Coefficient of Variation
Chicago, CMSA	2%	1%	191.21
Cleveland, CMSA	3%	1%	246.77
Detroit-Ann Arbor, CMSA	10%	2%	485.05
Kansas City, CMSA	2%	2%	97.23
Minneapolis, CMSA	2%	3%	77.48
Pittsburgh	2%	1%	412.77

As perhaps intuitively expected, the coefficients of variation are lowest in Minneapolis and Kansas City, suggesting that the change in the depth of demand has been rather dependable over time. Detroit, Pittsburgh, and Cleveland exhibit the highest coefficients of variation, suggesting that the certainty of growth in demand is less than 25 percent less sure than in the case of both the Kansas City and Minneapolis metro areas.

As with the timing of growth, both an area's major industry sectors and the percent they comprise of total employment vary greatly. Across time, sectors' increasing/ decreasing captures of total growth reveal a concentration toward or a diversification away from the economy's predominate sectors. Commentary on whether shifts toward or away from certain sectors are healthy, depends upon whether the sectors that are losing share are considered to have strong prognoses for future growth. The transient nature of certain types of employment or industry sectors' associated wage rates are considered to create jobs likely to demand for create rental units. For instance, military employment, retail, and manufacturing sectors are recognized to produce a much higher percentage of renters than service or finance, insurance, and real estate (F.I.R.E.) sectors. Projects located in areas where industry sectors produce a higher share of renters are considered to create more renter demand.

Industry sector volatility plays an important role in understanding differences in composition between markets and the certainty of demand. For instance, construction and manufacturing employment tends to fluctuate dramatically over a period of several years. Conversely, service and government sectors are more stable sectors, whose presence and certainty of demand is relatively certain. Investment decisions in markets dependent upon volatile employment sectors can be considered much more risky than investments in markets either dependent upon stable sectors or well represented in a variety of sectors.

2.1.2 Supply Conditions

Supply-side stock and flow variables for housing are more straight forward than demand: *total occupied plus total vacant units* represent the stock variable and *total residential building permit issuances* represents the flow variable. Permit issuances can be more closely related to rental supply by distinguishing between single-family and multi-family units.

Defined as all existing (occupied and vacant) structures, housing stock data is published through the Department of Census' Housing Characteristics Survey at ten-year census intervals. The figures separate vacant and occupied units between owner/renter tenure down to township and city level. At any point in time, stock can be calculated by aggregating net permits (new permits minus demolitions) to some previous stock level. This relationship is useful because stock can be accurately estimated at interim years.

Permit issuances are collected on a monthly basis by the building department of each individual township or jurisdiction into number and value of permits issued for single-family units, two family units, three or more family units. Monthly totals are considered to be less accurate than annual totals. The data is aggregated for towns, counties, and metropolitan areas by the U.S. Department of Census' State Data Centers as part of the Construction-40 (C40) Series. Census data is available on hard copy through the individual towns or State Data Centers. Figures published by local chambers of commerce, economic development agencies are Census figures.

The absolute number of houses added relative to the historic housing base over time provides a sense of relative scale and timing of an area's supply growth. Some areas experienced the majority of their housing growth in the 1950s and 1960s. Others experienced their greatest growth in the 1980s. The information is useful to characterizing the depth and timing of historic supply. Metro examples follow for total and multi-family permit issuances:

Metro Area	Total Permits	Permit Growth 1960-1970	% of Total 1960-1970	Permit Growth 1970-1980	% of Total 1970-1980	Permit Growth 1980-1989	% of Total 1980-1989
Total Permits:							
Chicago, CMSA	854,921	345.789	40%	315,110	37%	194,022	23%
Cleveland, CMSA	259,617	124,517	48%	86,279	33%	48,821	19%
Detroit-Ann Arbor, CMSA	676,478	274,565	41%	258,333	38%	143,580	21%
Kansas City CMSA	318,156	104,545	33%	108,511	34%	105,100	33%
Minneapolis, CMSA	543,420	172,113	32%	181,456	33%	189,851	35%
Multi-Family Permits:							
Chicago, CMSA	455,892	196,088	43%	169,710	37%	90,094	20%
Cleveland, CMSA	120,730	66,622	55%	37,040	31%	17,068	14%
Detroit-Ann Arbor, CMSA	247,205	88,000	36%	98,106	40%	61,099	25%
Kansas City CMSA	131,708	42,751	33%	42,557	32%	46,400	35%
Minneapolis, CMSA	223,442	85,519	38%	66,450	30%	71,473	32%

Similar to their employment findings, Cleveland and Detroit experienced a tapering off in supply of total and multi-family housing from decade to decade. Both Kansas City and Minneapolis both continued to permit at a steady pace over the same period, and Chicago permitted at a decreasing rate that did not increase in accordance with employment upticks in the 1980s.

Volatility analysis is also insightful on the supply side. Standard deviations and means of total permits for selected metropolitan areas between 1960 and 1989 follow:

Metro Area	STD on % Change in Total Permits	Mean on % Change in Total Permits	Coefficient of Variation
Chicago, CMSA	33%	4%	812.73
Cleveland, CMSA	37%	5%	773.25
Detroit-Ann Arbor, CMSA	33%	4%	812.93
Kansas City, CMSA	33%	4%	748.13
Minneapolis, CMSA	28%	4%	619.96

The findings indicate that supply conditions are clearly more volatile than the demand, where coefficients of variation range between 619 and 812, in comparison to employment growth's coefficient of variation range of 77 to 285. However, there is much less disparity between markets. Chicago and Detroit reflect the greatest uncertainty in supply, but are closely followed by Cleveland and Kansas City.

Multi-family permitting exhibited a similar pattern to total permitting in all five areas; with the exception of Detroit, multi-family units were permitted at an increasing rate between 1960 and 1989:

Metro Area	STD on % Change in MF Permits	Mean on % Change in MF Permits	Coefficient of Variation
Chicago, CMSA	41%	6%	707.37
Cleveland, CMSA	57%	15%	384.12
Detroit-Ann Arbor, CMSA	52%	14%	359.80
Kansas City, CMSA	49%	11%	459.52
Minneapolis, CMSA	45%	10%	460.79

Chicago exhibits the greatest volatility in multi-family permitting, attributable to a low mean relative to a typical standard deviation in relation to the other markets. Identifying the source of the volatility helps to assign a weight to the level of uncertainty and incorporate the findings in the analysis. For instance, Detroit's relative high coefficient of variation in total permits does not seem to be attributable to multi-family permitting, since the multi-family coefficient is the second lowest of the markets analyzed. In any case, supply's relative volatility suggests that future supply is difficult to predict across markets in the short term.

2.2 Direction of Growth

The direction of growth toward and away from certain locations can only be determined by evaluating individual sub markets within the context of the larger metropolitan market. For instance, positive employment growth at the county level (independent of whether the sub market exhibits the highest growth rate in the metro area) does not provide insight on whether the current share of the sub market's growth is greater or less than its relative share in previous years. Capture analysis is the enabling tool for identifying spatial shares and shifts of housing and job growth.

The share of jobs and housing that counties receive over time varies dramatically across sub markets. Where some areas are known to "specialize" in jobs and others in "housing," capture analysis provides adequate information from which to discern the direction of demand and supply growth. For example, sub markets that contain original downtown areas typically established their employment base early in the century and have failed to capture their fair share of employment growth for decades. Conversely, once sleepy rural sub markets, that evolved into bedroom communities in the 1970s have typically been received several times in excess of their fair share of employment since the 1980s. The distinction of a sub market's identity as a "bedroom" or "job" community is particularly relevant to the development of rental housing, since apartment product tends to be more employment driven than for-sale product, where homeowners will opt to commute greater distances for the opportunity of home ownership.

The large variance employment and housing dynamics is clearly seen in three Detroit metro sub markets in Detroit:

Sub Market	% of Total Employment	% Capture of Emp. Growth 1980-1990	% of Existing Stock	% Capture of Permits 1980-1990
Wayne County	49%	-19%	40%	9%
Macomb County	14%	37%	14%	24%
Oakland County	24%	66%	23%	47%

Comprising the geographic area considered to include original downtown Detroit, Wayne County historically represented a significant portion of the employment base; however, its percentage capture of recent employment growth is negative, revealing that the direction of job growth is away from the County. On the other hand, Macomb and Wayne County combined, which historically represented smaller shares of the metro area's job base, together received 97 percent of the metro area's employment growth in recent years, suggesting that the direction of job growth is very much toward these counties.

Similar to employment trends, at 40 percent Wayne County historically represented a significant portion (40 percent) of the supply base; however, its percentage capture of recent permitting is much lower than its historic share (9 percent), suggesting that the direction of housing growth is also away from the County. Macomb and Oakland's capture of recent permitting in excess of their historic share substantiates that the direction of housing growth is toward those counties.

2.3 Conclusions Relating to Demand/Supply Imbalances

Neither demand nor supply indicators are alone sufficient components for assessing a project's feasibility. Substantiating feasibility through record employment growth denies the supply half of the equation, since when coupled with record levels of permitting activity, opportunities for additional product could be precluded. The value of tracking both supply and demand trends extends beyond their citation, but into the same quantitative attention to supply trends as are typically accorded demand trends. Often feasibility studies reserve the quantitative research for the demand side of the equation and reserve qualitative analysis for the supply side.

Similarly, neither metropolitan-level nor sub market level trends are sufficient in isolation for assessing feasibility. Substantiating an investment's feasibility on sub market conditions alone denies the relevance of the health of the metropolitan area to which the health of the sub market is inexorably linked. Findings on the spatial shifts and shares of jobs and housing relative to the metro area offer critical insight into feasibility.

Ratios of existing *stock* and *total employment*[4] across time serve to benchmark an area's historical relationship of houses to jobs. Ratios of permit issuances to employment growth between 1980 and 1989 characterize recent building/growth trends. When the ratios are compared across years as well as across geographic areas, an assessment can be made about the extent to which an area has built for the level of growth that it has experienced over time. A comparison across metro areas follows:

Metro Area	1960-1989 Total Perm/ Emp. Growth	1980-1989 Total Perm/ Emp. Growth
Chicago, CMSA	0.92	0.68
Cleveland, CMSA	1.10	2.79
Detroit-Ann Arbor CMSA	0.98	2.14
Kansas City CMSA	0.84	0.98
Minneapolis, CMSA	0.71	0.71

Kansas City, Cleveland, and Detroit's recent ratios of permits to employment growth exceed their historical relationship. This is particularly the case in Cleveland and Detroit, where the recent ratio is almost double the historical one. In both cases, permits and employment had been tapering off since the 1960's, however, employment declines far outpaced permit declines. Minneapolis, which experienced steady permitting and employment ratios since 1960, continues to build on par with historical levels. Chicago's employment uptick in the 1980s was not accompanied by increases in housing, as reflected by recent building ratios that were lower than historic building ratios.

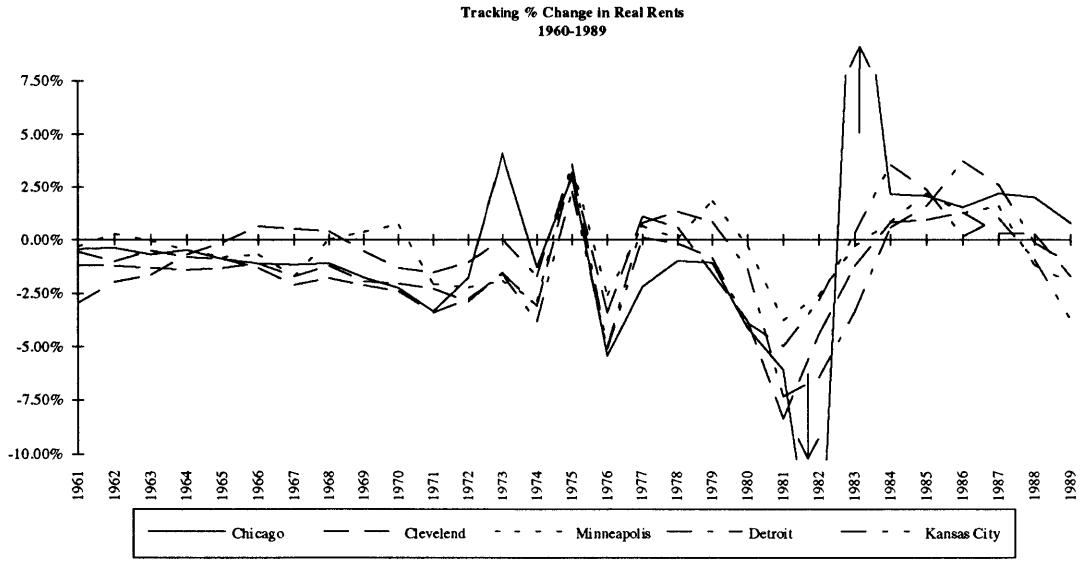
[4] This relationship can also be substituted for permit issuances and employment growth covering a thirty-year period.

Reviewing the same trends with respect to multi-family permits relates the analysis more closely to the health of the apartment market.

Metro Area	1960-1989 MF Perm/ Emp. Growth	1980-1989 MF Perm/ Emp. Growth
Chicago, CMSA	0.49	0.32
Cleveland, CMSA	0.51	0.97
Detroit-Ann Arbor CMSA	0.36	0.91
Kansas City CMSA	0.35	0.35
Minneapolis, CMSA	0.29	0.27

With slight variation, the trends are similar to total permits trends. Both Cleveland and Detroit reveal recent over building. Kansas City, however, maintained the same recent ratio to historic. Minneapolis and Chicago are both slightly under built relative to historic levels. The assessment of over and under building should be supplemented with performance indicators, like rent levels and vacancy trends (where available) which offer further commentary on the area's effectiveness at building appropriately for the level of growth experienced. For instance, an area could be under built relative to historical levels, yet its vacancy rate could be stable, which could offer the interpretation of a loose market from previous over building.

Rental rates are surveyed for a sample of 25 metropolitan areas on a monthly basis through the Bureau of Labor Statistics. The series is part of the "Consumer Price Index" series (residential rent category) and is indexed to 100 between 1982 and 1984. In order to assess real growth in rents, the nominal percentage growth reflected throughout the index must be deflated into the percentage growth in real rents. The graph of percentage growth in real rents follows:



Vacancy trends are collected annually on a rotating basis for 44 select metropolitan areas through the Vacancy Survey. Interim years are extrapolated. The data includes only rental apartments, not rented single-family houses and can be coupled with multi-family permit and employment figures in individual markets to offer insight into rental market performance history in response to job/housing growth.

Both rental rate and vacancy trend figures are available at the metropolitan, county, and township levels at census years through the US Census' General Housing Characteristics survey. Census figures count all rented units, including rented single-family houses as well as rental apartments.

Chapter Three

"Feasibility Framework" Applied to Metro Analysis

This chapter critically evaluates the metropolitan portion of the original feasibility research conducted on four existing BFG deals in an attempt to learn from the market experience and the track record of the properties' performance to make better informed investment decisions in the future. The methodology adopted: 1) applies the analysis presented in the "Framework" introduced in Chapter Two to the case studies; 2) and utilizes the findings as a framework for reviewing the original research.

The two metropolitan areas considered were the Kansas City CMSA and the Detroit-Ann Arbor CMSA.

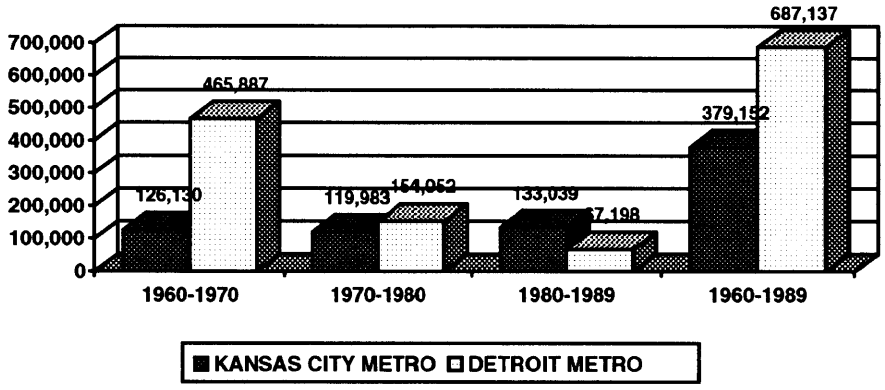
3.1 Framework Applied

The following section analyzes trends outlined in the previous chapter and draws market conclusions without reference to the prior research conducted by BFG. All data can be ordered from national sources and the analysis can be conducted prior to field research. This section produces conclusions about whether the two metro areas can support new or existing development that is under review for BFG's investment.

3.1.1 Demand/Supply Conditions

Demand. Kansas City added approximately 380,000 jobs between 1960 and 1989, representing approximately 49 percent of the 714,000 employment base in 1989. Per Table 3.1, the area added jobs on a relatively stable basis, where 33 percent of total additions occurred between 1960 and 1970, 32 percent between 1970 and 1980, and 35 percent between 1980 and 1989. See Table 3.1.

Table 3.1
DISTRIBUTION OF MPLOYMENT GROWTH
KANSAS CITY & DETROIT METRO AREAS
1960-1989



Detroit has approximately three times the employment base of Kansas City and added approximately twice the jobs (687,000) between 1960 and 1989. Growth over this period represented approximately 36 percent of the 1,934,000 employment base in 1989. In contrast to Kansas City's even distribution of growth over the 30 year period, Detroit's share of job growth has been sharply declining since the 1960s. Statistically, 68 percent of total additions occurred of total between 1960 and 1970, 22 percent between 1970 and 1980, and only ten percent between 1980 and 1989. See Table 3.1.

When presented annually, Detroit's employment history of employment growth is four times more volatile than Kansas City's. Kansas City's, whose coefficient of variation was amongst the lowest and Detroit's amongst the highest of those metro areas considered in Chapter Two:

Volatility in % Growth in Employment between 1960-1989

Area	STD	Mean	Coeff. of Var.
Kansas City CMSA	2%	2%	97.23
Detroit-Ann Arbor CMSA	10%	2%	485.05

Kansas City's predominant industry sectors are manufacturing, retail trade, services, and government. Per Table 3.2, manufacturing has been losing share and services have been gaining share. Retail trade and government have represented a relatively stable share of total employment over time.

Table 3.2
% EMPLOYMENT DISTRIBUTION
KANSAS CITY METRO
1970-1989

Industry Sector	1970	1980	1989	Total % 70-80	Change. 80-89
Total	100.00%	100.00%	100.00%	22.25%	20.70%
Agricultural	2.27%	1.77%	1.33%	-4.70%	-9.57%
Agricultural	0.29%	0.42%	0.59%	77.30%	71.95%
Mining	0.12%	0.20%	0.18%	95.00%	9.62%
Construction	4.74%	4.50%	5.03%	16.19%	34.90%
Manufacturing	**19.88%**	**16.01%**	**11.84%**	**-1.53%**	**-10.78%**
T.C.P.U.	8.67%	7.48%	7.35%	5.46%	18.61%
Wholesale Trade	6.72%	6.98%	6.72%	27.01%	16.21%
Retail Trade	**16.25%**	**16.70%**	**16.71%**	**25.61%**	**20.75%**
FIRE	6.82%	8.32%	8.92%	49.12%	29.48%
Services	**17.88%**	**22.30%**	**26.87%**	**52.52%**	**45.39%**
Government	**16.35%**	**15.31%**	**14.46%**	**14.47%**	**13.98%**

Per Table 3.3, certain sectors stand out as particularly volatile. They include: construction, manufacturing, and retail trade, two of which are Kansas City's largest industry sectors. Service as well as transportation, communication, and public utilities (T.C.P.U.) sectors show the lowest volatility. Those sectors that comprise a significant percentage of total employment within the subject properties' market areas create a much less stable tenant profile than those projects located in areas where employment sectors are stable. Because of their associated wage rates, it is unlikely that, regardless of these jobs proximity to the subject site, low-income projects will attract a high percentage of tenants employed in F.I.R.E and service sectors.

Table 3.3
Industry Sector Volatility
Kansas City Metro
1960-1989

	Farming	Other	Mining	Cnstrn.	Man.	T.C.U.	Retail Trade	Whlsale. Trade	F.I.R.E.	Serv.	Gov.
STD	0.45	0.36	0.14	6.68	43.97	3.41	5.68	9.82	4.13	11.34	6.19
AVG:	-0.20	0.43	0.07	0.73	-5.85	0.24	1.22	6.43	3.13	18.49	2.45
C. OF VAR:	-219.59	83.79	198.41	910.79	-751.46	14.21	467.31	152.77	131.65	61.31	252.97
% of Total Emp:	*0%*	*1%*	*0%*	*4%*	*21%*	*4%*	*5%*	*18%*	*7%*	*28%*	*13%*

Per Table 3.4, Detroit's predominate industry sectors are also manufacturing, retail trade, services, and government. Over the past twenty years, manufacturing has been losing share. Detroit's service sector has grown over the same time period; in 1989, it comprised 28 percent of total employment, comparable in share to Kansas City's service sector. Retail and government sectors have maintained steady shares.

Table 3.4
% EMPLOYMENT DISTRIBUTION
DETROIT METRO
1970-1989

Industry Sectors	1970	1980	1989	Total % 70-80	Change. 80-89
Total	100.00%	100.00%	100.00%	15.10%	16.39%
Agricultural	0.71%	0.66%	0.46%	7.21%	-19.09%
Agricultural	0.27%	0.36%	0.54%	56.29%	75.73%
Mining	0.08%	0.11%	0.12%	56.76%	26.72%
Construction	4.27%	3.51%	3.91%	-5.51%	29.58%
Manufacturing	**31.90%**	**25.47%**	**20.57%**	**-8.11%**	**-6.00%**
T.C.P.U.	5.12%	4.48%	4.12%	0.79%	6.93%
Wholesale Trade	5.30%	4.73%	4.96%	2.76%	22.11%
Retail Trade	**16.13%**	**16.83%**	**17.59%**	**20.12%**	**21.65%**
FIRE	5.61%	6.36%	6.76%	30.63%	23.70%
Services	**17.78%**	**22.64%**	**28.23%**	**46.58%**	**45.11%**
Government	**12.85%**	**14.85%**	**12.74%**	**33.00%**	**-0.13%**

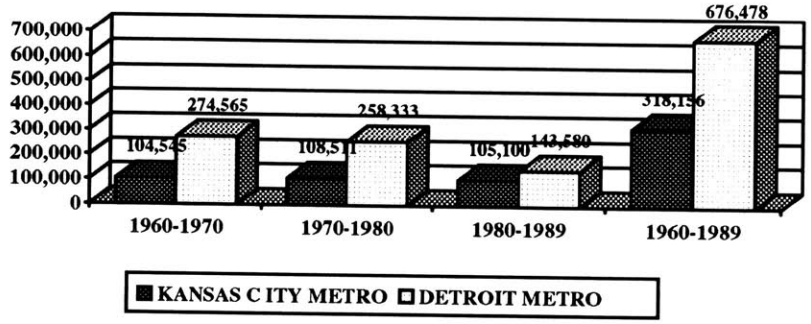
Detroit's most volatile sectors also include construction and manufacturing. See Table 3.5. Retail trade is much less volatile in this market than in Kansas City. Government and T.C.P.U. are particularly stable over the 30-year period. The subject properties' anticipated representation in their tenant base should be assessed to discern whether a sizable portion of the tenant base's employment will be in unstable sectors. As in the case of Kansas City, the service sector's associated wage rates are likely too high to be representative of a high percentage of tenants' employment.

Table 3.5
Industry Sector Volatility
Detroit Metro
1960-1989

	Farming	Other	Mining	Cnstrn.	Man.	T.C.U.	Retail Trade	Whlsale. Trade	F.I.R.E.	Serv.	Gov.
STD	0.45	0.36	0.14	6.68	43.97	3.41	5.68	9.82	4.13	11.34	6.19
AVG:	-0.20	0.43	0.07	0.73	-5.85	0.24	1.22	6.43	3.13	18.49	2.45
C. OF VAR:	-219.59	82.79	198.41	910.79	-751.46	0.07	0.12	0.12	0.22	0.25	0.07
% of Total Emp:	*1%*	*1%*	*0%*	*5%*	*12%*	*7%*	*7%*	*17%*	*9%*	*27%*	*14%*

Supply. Kansas City permitted approximately 318,000 units between 1960 and 1989, representing approximately 63 percent of the 1989 total stock of 503,000 units. Similar to employment, the area added units on a relatively stable basis: 33 percent of total units were added between 1960 and 1970, 34 percent between 1970 and 1980, and 33 percent between 1980 and 1989 (See Table 3.6).

Table 3.6
DISTRIBUTION OF TOTAL PERMIT ISSUANCES
KANSAS CITY & DETROIT METRO AREAS
1960-1989



Detroit has approximately 3.5 times the housing stock of Kansas City. It added approximately 676,000 units between 1960 and 1989, representing approximately 39 percent of the 1989 total stock of 1,725,000. Similar to their declining employment trends, Detroit's share of housing growth has been accordingly declining since the 1960s; however, not as drastically as Kansas City's employment. Per Table 3.6, 41 percent of houses were added between 1960 and 1970, 38 percent between 1970 and 1980, and 21 percent between 1980 and 1989.

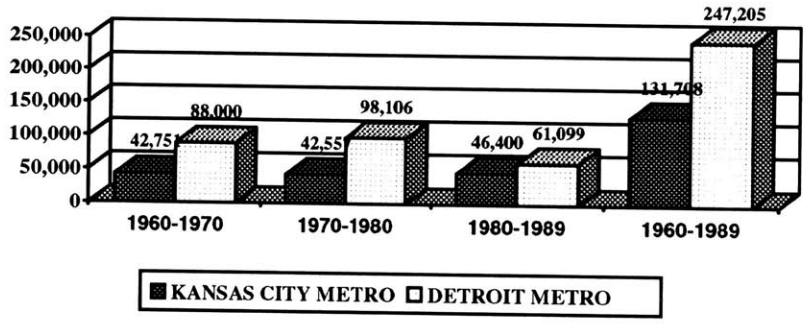
Both area's total permit volatility is similar to one another as well as the other areas offered for comparison in Chapter Two:

Volatility of Permit Issuance between 1960-1989

Area	STD	TOTAL PERMITS Mean	C. of Var.
Kansas City CMSA	0.33	0.04	748.13
Detroit-Ann Arbor CMSA	0.33	0.04	812.92

Kansas City's multi-family permit issuances follows the pattern of total issuances: 32 percent between 1960 and 1970, 32 percent between 1970 and 1980, and 35 percent between 1980 and 1989. See Table 3.7.

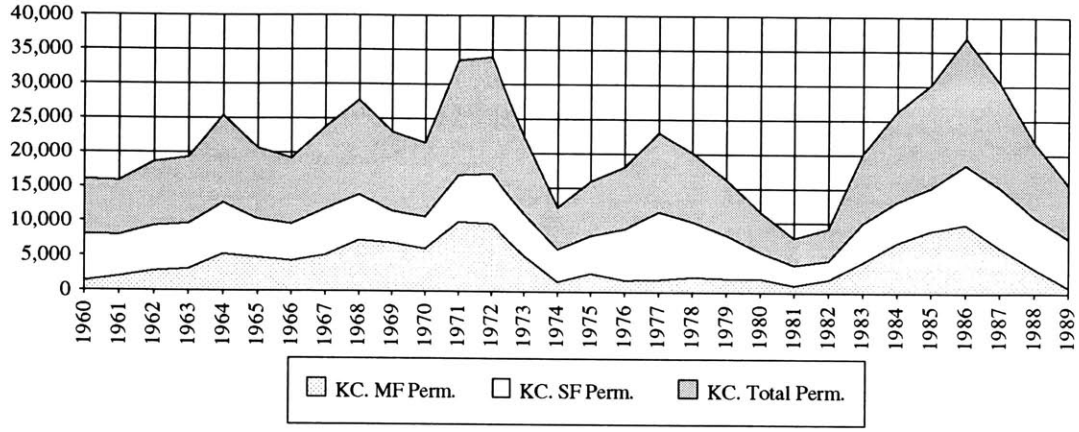
Table 3.7
DISTRIBUTION MULTI-FAMILY PERMIT ISSUANCES
KANSAS CITY & DETROIT METRO AREAS
1960-1989



On the other hand, Detroit's multi-family distribution does not track as closely to their single family as Kansas City's, where 36 percent of multi-family units were added between 1960 and 1970, 39 percent between 1970 and 1980, and 21 percent between 1980 and 1989. See Table 3.7.

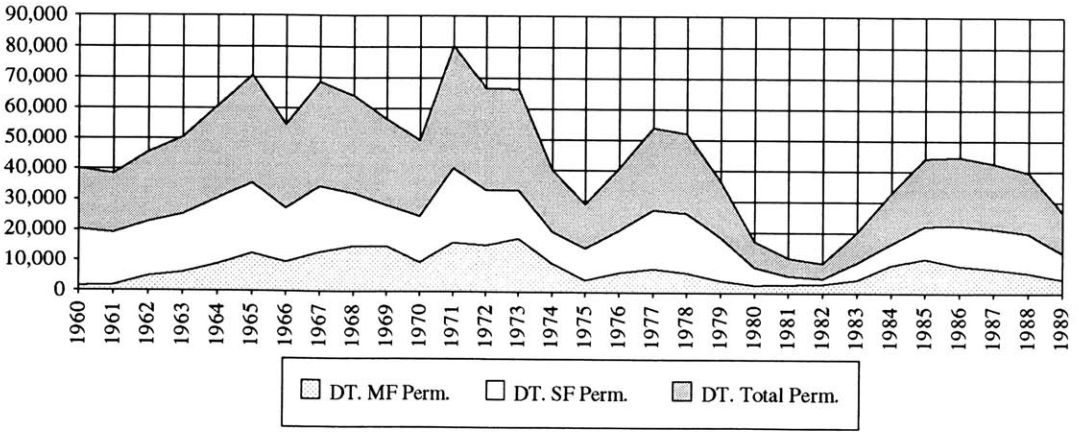
Between 1960 and 1989, 41 percent (approximately 132,000) of Kansas City's permit issuances were multi-family. This percentage ranged over the 30-year period from 12 to 60 percent. Most recently (1980-1990), multi-family permits as a share of total have exceeded average by approximately three percentage points. This can be visibly seen on Table 3.8.

Table 3.6
BREAKDOWN OF RESIDENTIAL PERMITS
KANSAS CITY METRO
1960-1989



Detroit permits almost twice as many multi-family units as Kansas City. Between 1960 and 1989, 37 percent of total permits issued in Detroit (approximately 247,000 permits) were multi-family. The percentage ranged over the 30-year period from eight to 53 percent. See Table 3.9 or a graphic depiction of permit trends.

Table 3.7
BREAKDOWN OF RESIDENTIAL PERMITS BY TYPE
DETROIT METRO
1960-1989



The higher volatility in total and multi-family permit issuances relative to employment growth is evident in both markets, suggesting that new supply is difficult to predict in both markets in the short term.

Volatility of Permit Issuance between 1960-1989

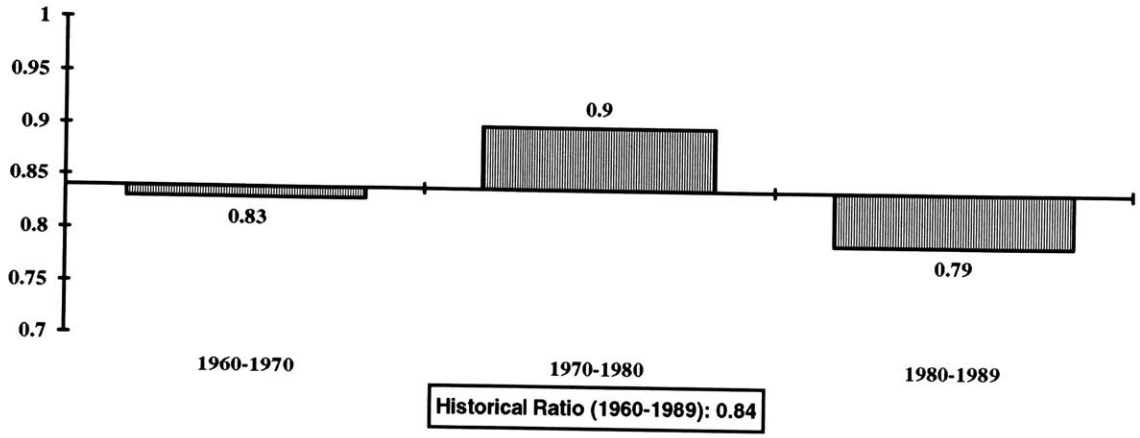
	MF PERMITS		
Area	**STD**	**Mean**	**C. of Var.**
Kansas City CMSA	0.49	0.11	459.52
Detroit-Ann Arbor CMSA	0.52	0.14	359.80

3.1.2 Conclusions Relating to Demand/Supply Imbalances

When supply conditions are overlaid on supply conditions in each market, imbalances can be detected and assessments about over or under building in the market place can be made. Rental appreciation trends which offer commentary on built supply's performance relative to new demand and supply. When combined, conclusions can be drawn about the metro market's equilibrium or disequilibrium.

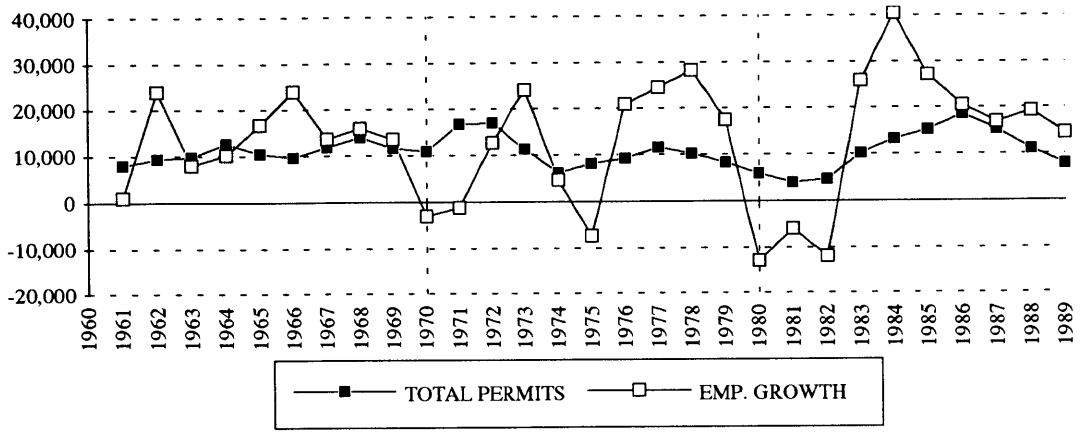
Ratios of permits over employment growth is a means of overlaying demand and supply conditions. Between 1960 and 1989, Kansas City's ratio of total permits to employment growth averaged 0.84 (See x-axis on Table 3.10). The city built at a slightly higher than historic ratio between 1970 and 1980 and at a slightly lower than historic ratio between 1980 and 1989. Overall the ratio (calculated per decade) ranged only 0.11 points, between 0.79 and 0.90.

Table3.10
SUPPLY/DEMAND INDEX
TOTAL PERMITS/ EMP. GROWTH
KANSAS CITY
1960-1989



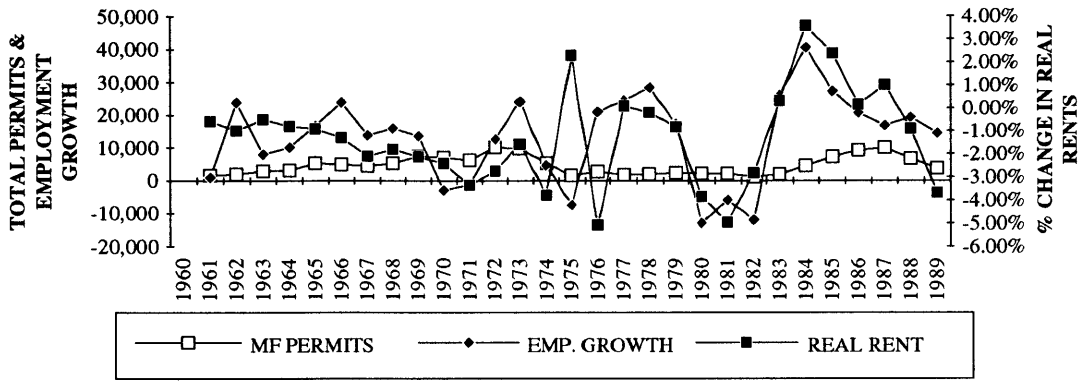
When the base numbers are reviewed on an annual basis, trends clearly reveal both a peak and a trough employment growth and permit figures between 1980 and 1989 (See Table 3.11). Since employment growth has exceed permit issuances in since 1984, it is possible that the market absorbed any over building from the decade prior and the first several years of the 1980s, when permit issuances exceeded employment growth. A closer look at multi-family permits to employment growth is required to assess rental conditions.

Table 3.11
Total Permits / Employment Growth
Kansas City Metro
1960-1989



The steady ratio of multi-family permit issuances to employment growth remained unchanged from 0.35 since 1960, its constant share neither clarifies nor clouds the analysis as to where the market is over built. See Table 3.12. When coupled with a performance indicator, percentage changes in real rental rates, like real rent changes track closely with employment growth. Both peaked in 1984, while multi-family permit levels continued to rise through 1987. Real rates increased at a decreasing rate for two years and actually began falling in 1986.

Table 3.12
Multi-Family Permits & Employment Growth
Trended Against Real Rents
Kansas City Metro
1960-1989

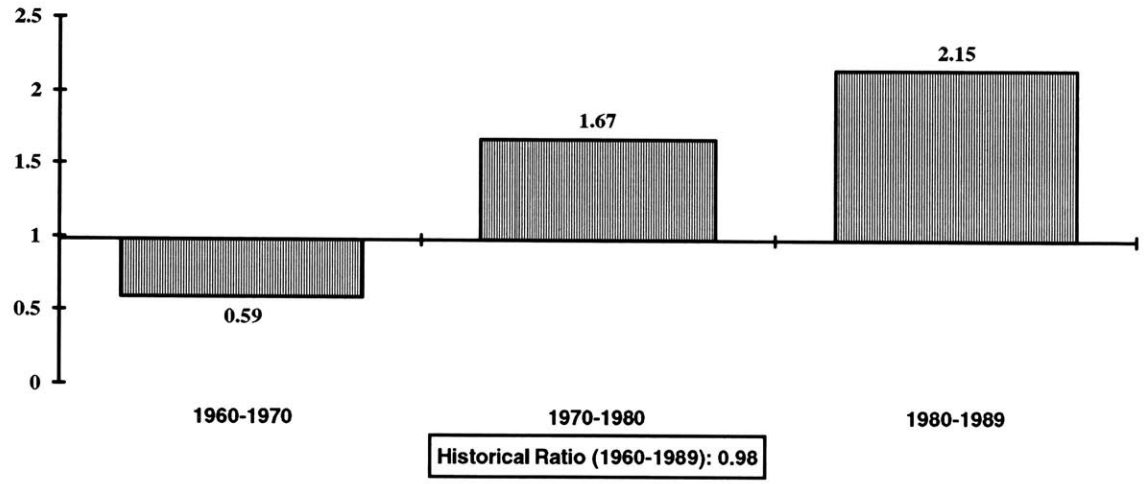


The above graph suggests that the market had tightened up between 1982 and 1984 (as reflected through rising growth in real rates) when additional multi-family product came on line and softened the market. Vacancy rates over the past seven years support this conclusion, where rates had risen to 12.5 percent by 1986 and had only fallen to 9.9 percent by 1989. The 1989 situation of falling real rents, coupled with decreasing vacancies, suggests that product is offering concessions to fill units.

Overall, the Kansas City rental market will be soft in the short term as it continues to recuperate from over building that occurred in the mid 1980s, and will be soft in the short term. Market conditions are characterized by declining vacancies, but a continued spread between effective and asking rents. Since Kansas City has continued to grow at a steady pace over the past 30 years, it is unlikely to see extreme shifts upwards or downwards; however, continued building will keep the market concessionary. The market is considered a low risk for multi-family investment.

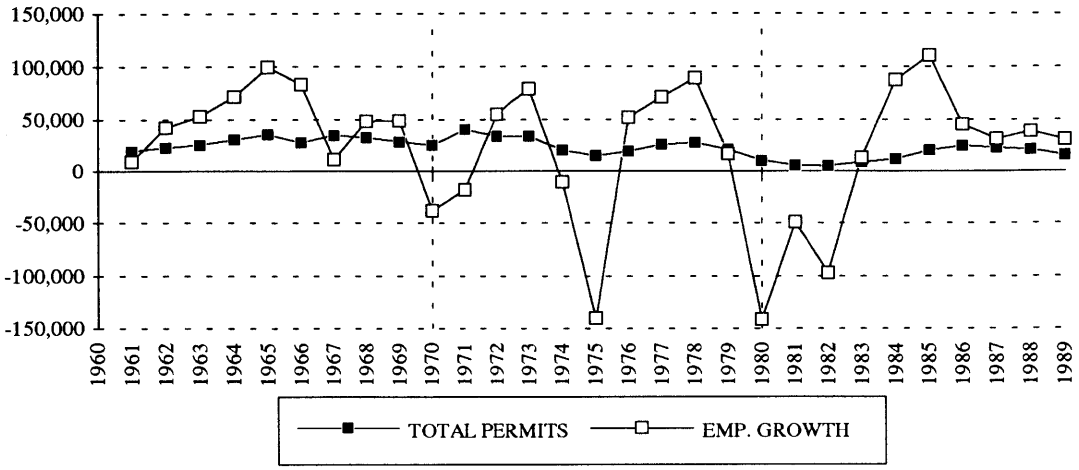
Between 1960 and 1989, Detroit's ratio of total permits to employment growth averaged 0.98. Since the 1970's the city has been building at significantly higher and increasing ratios than historically experienced. Overall the ratio (calculated per decade) ranged from 0.59 (between 1960 and 1970) to 2.15 (between 1980 and 1989). See Table 3.13.

Table 3.13
SUPPLY/DEMAND RELATIONSHIP
DETROIT METRO
1960-1989



Returning to prior analysis of job and housing trends on an annual basis, it is clear that the variability in ratios is due to the significant decline in employment over the 30-year period that was not matched by proportional declines or variability in permit issuances. See Table 3.14.

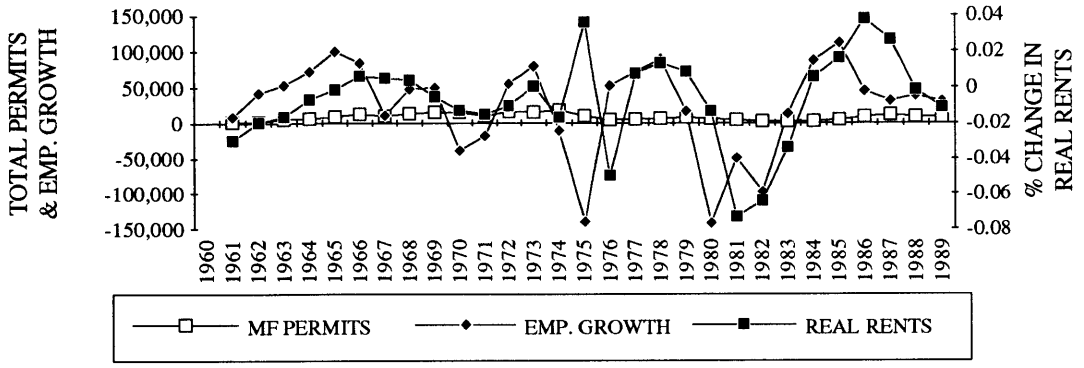
Table 3.14
Total Permit / Employment Growth
Detroit Metro
1960-1989



The steady ratio of multi-family permit issuances to employment growth mirrored the trend in total units, where the historic ratio of 0.36, was exceeded between both 1970 and 1980 and 1980 and 1989, with ratios of 0.63 and 0.92, respectively.

When coupled with a performance indicator (like percentage changes in real rental rates), real rent changes track closely with employment growth. See Table 3.15. When employment peaked in 1984, real rents peaked a year later. Furthermore, when multi-family permits began to rise in 1985, the increasing growth in real rents ceased. In 1988, real rents actually declined. Vacancy statistics support a conclusion of over building, where rates began to rise in 1986 from five percent to a high of 8.5 percent by 1988.

Table 3.15
Multi-Family Permits & Employment Growth
Tracked Against Real Rents
Detroit Metro Area
1960-1989



The Detroit market can be concluded to be generally over built with rental product. As in the case of Kansas City, the situation of falling real rents and decreasing vacancies suggests that product is offering concessions to fill units. The area's 20-year building history of over building (mirrored in multi-family product), coupled with the economy's heavy dependence on a declining and historically volatile employment sector (manufacturing), create for a high risk market for multi-family investment. Detroit's long-term viability lies in its ability to transition into growing industries that compensate for job loss in manufacturing.

3.2 Review of Original Research

While the original BFG metropolitan research varied greatly in content between the two Kansas City deals and the two Detroit deals, in all four cases the level of analysis of metro trends was cosmetic in the sense that the data was not used or related to the individual investments' feasibility. BFG conducted three of the four studies (two Kansas, one Detroit), while RERC conducted the fourth.

3.2.1 Kansas City, CMSA

The two Kansas City studies were created from the same template and were therefore identical from a metropolitan perspective. All trends were cited against the context of five other areas: Minneapolis-St. Paul, Dallas-Fort Worth, St. Louis, Denver, and the United States. The cities were chosen for their central U.S. locations.

While the approach of providing context through other markets is useful in its attempt to provide a background from which to assess Kansas City's relative size and growth, many of the comparisons drawn across metro areas are incorrectly focused on the comparison of growth rates (largely a function of the relative size of an area's base rather than a reflection of the magnitude of growth) instead of being focused on distribution/composition differences. Therefore, evaluative statements, like "Kansas City had the second highest [percentage] growth rate in the labor force" is invalidated by the five area's large variance in size. Instead, the most useful comparisons across areas are related to composition and distribution of growth, i.e., "Kansas City has a higher percentage of T.C.P.U. employment than four of the five areas " The majority of comparisons make the former methodological error.

Furthermore, selecting areas in the central US does not necessarily ensure an "apples to apples" comparison; both Denver and Dallas, which have different economic profiles from Kansas City, trend differently than the other three, for entirely dissimilar reasons for which no lessons can be learned for Kansas City.

The indicators cited in the original analysis included: population, income, labor force trends, retail trade, and manufacturing employment, and qualitative information on commercial construction trends. All of these indicators measure demand. When assessed against the above stated priorities of using the research to measure supply and demand imbalances, assess volatility, and draw conclusions, the reports neither seek to asses feasibility nor provide the adequate data from which the reader can draw his/her own conclusions.

Supply/Demand Conditions

The original research likens positive demand growth to unmet demand. Neither supply trends nor performance trends are introduced from which to assess the accompanying level of building or from which to offer commentary on the market's ability build effectively for the growth. While not mentioned in the text, the exhibit referred to in the feasibility package does include total permit issuance figures and the percentage of multi-family permits for 1987. However, one year of supply estimates offer little contribution to analyzing supply and demand conditions.

The quality of the indicators as measures of demand is poor:

- the proven inaccuracy of population figures at interim years undermines their value as an indicator of housing demand;
- civilian labor force figures are a subset of employment figures and bring little additional information to measuring the depth of demand;
- similar to labor force statistics, estimated buying income (EBI) is a subset of household income, clearly a preferable indicator for LIHTC analysis because of its direct relevance to the LIHTC program qualification;
- retail sales defines buying power rather than demand for housing and simply clouds the analysis; and
- lastly, the only employment sector mentioned is manufacturing, a mere 7.5 percent of total employment. No discussion of any other sectors is provided.

Commercial building projects are cited to reveal positive demand. Yet the 1980's track record of commercial over supply proves that stock does not equate to demand. Without commercial market performance indicators (net absorption or occupancy trends) no conclusions about feasibility can be drawn.

With the exception of population trends (which are cited at intervals between 1950-1987), no long term trends are assessed. Even for shorter period, citations are inconsistent across forms (base numbers/ total number change/ total percentage change/ annual percentage change) and time periods, as follows:

Indicator	Base #	Total %	Annual %	Years Cited
Population	Base 1987		X	1950, 1960, 1970, 1980,-1987
Civilian Labor Force	Total 1980		X	1980-1987
Unemployment		X		Dec. 1987 and July 1989
Labor Force Participation		X		Dec. 1987
Effective Buying Income	Per Capita 1970	X		1970 and 1987
Retail Sales	Per Capita 1987	X		1977-1987
Manufacturing Employment			X	1977-1987
Housing Construction	Total 1987	% Multi-family		1987

Based on the above, no assessments can be made about the volatility of the market or the certainty of demand and supply conditions.

Conclusions

The analysis concludes that Kansas City "grew slowly in the 1970s and boomed in the 1980s." The area is further assessed to have a diverse and expansive economic base since it effectively weathered the farm crisis and the decline in manufacturing. The data and analysis

provided does not support these conclusions or provide enough information from which to draw alternate ones.

While population figures reveal slower population growth in the 1970s than between 1980-1987, per the data provided, the growth in the 1980s is equal to percentage growth experienced in the 1960s and far lower than growth experienced in the 1950s. No other data is provided for a long period to compare the 1970s to the 1980s. Instead, the conclusions that could be drawn from this data is that Kansas City experienced a rebound in population growth in the 1980s back to historical levels.

Manufacturing only represents 7.5 percent of total employment, so would preclude a diverse employment base or be a primary determinant in the metro area's health. While manufacturing employment decline between 1977 and 1987 (of 3.9 percent) are referred to in the text, the chart suggests an actual increase of 4.9 percent over the same period. Lastly, data on agricultural employment, or its share of total employment, was never presented, from which to draw conclusions. No other support for a diverse or expanding economic base is provided.

No conclusions are drawn regarding demand/supply imbalances in the market from which to assess investment feasibility from a metro perspective.

Sources

The sources of data are frequently unclear. Population figures do match the local regional planning council's (MARC's) estimates or secondary data source estimates. Additionally, the source of labor force, retail sales, and employment data is not sourced.

Of all the potential difficulties with data sources and availability from area to area, metropolitan statistics are the easiest to collect with consistency and publication frequency. All data are available from national sources, making the collection of local or obscure sources are unnecessary.

3.2.2 Detroit, CMSA

No metropolitan analysis was conducted in either study for the Detroit Metro area. Only population statistics were cited in RERC's Oakview Square report.

Chapter Four

"Feasibility Framework" Applied to Sub-Market Analysis

This chapter critically evaluates the sub market portion of the original feasibility research conducted on four existing BFG deals in an attempt to learn from the market experience and the track record of performance to make better informed investment decisions in the future. The methodology adopted: 1) applies the analysis presented in the "Feasibility Framework" introduced in Chapter Two to the case studies; 2) and utilizes the findings as a framework for reviewing the original research.

Sub market trends should be analyzed from that area from which demand for product at the subject site is expected to emanate. This is typically on the county level, but could include more than one county if growth trends discernibly push from outside the county. This land area's definition is often a product of field interviews relating to competition, tenant profiles, their employment locations, etc. Therefore, tabling sub market research until the field research has been conducted is particularly is recommended when operating in an unfamiliar area. In all four cases, one county constituted a sub market.

The four sub markets considered were: Johnson County, Kansas; Platte County Missouri; and Oakland and Macomb County, Michigan. The two former are located in the Kansas City CMSA and the two latter are located in the Detroit-Ann Arbor CMSA.

4.1 Framework Applied

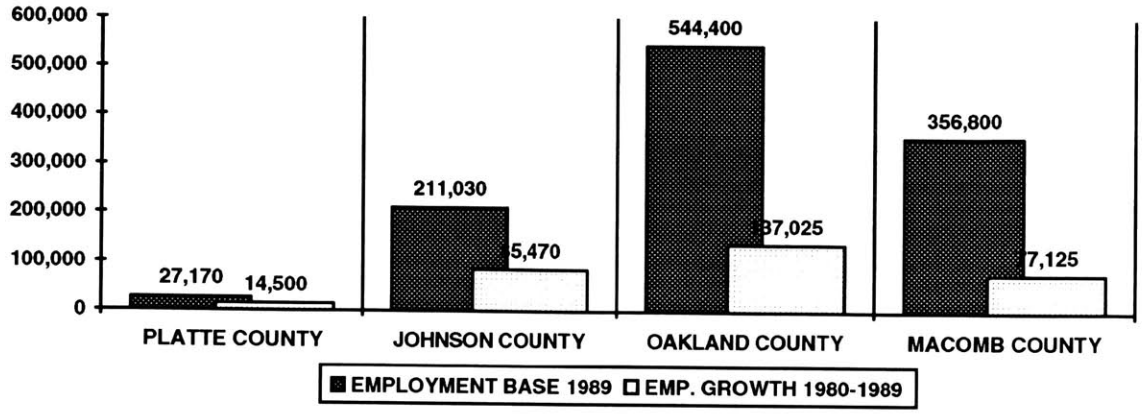
The following section analyzes trends outlined in Chapter Two and considers metro conclusions drawn in Chapter Three to assess sub market conditions without reference to previous research. All data (but county-level employment statistics) can be obtained through national sources. It produces conclusions about whether the sub market can support new or existing development under review for BFG's investment.

4.1.1 Demand/Supply Conditions

Demand. Per Table 4.1, Platte County added approximately 14,500 jobs between 1980 and 1989, representing approximately 54 percent of the 27,000 employment base in 1989. Johnson County, with about ten times the employment base of Platte County, added approximately 85,500 jobs between 1980 and 1989, representing approximately 41 percent of the 211,000 employment base in 1989. Both of these percentage additions to employment to their respective employment bases between 1980 and 1989 are greater than Kansas City's additions to its base over a thirty-year period.

In contrast to the above, Oakland County added approximately 137,000 jobs between 1980 and 1989, or only 25 percent of the 544,000 employment base in 1989 and Macomb County added approximately 77,000 jobs between 1980 and 1989, or 22 percent of the 357,000 employment base in 1989 (See Table 4.1).

Table 4.1
DEMAND BASE/
GROWTH
4 SUB MARKETS
1980-1989



Three of the four sub markets' primary industry sectors are retail trade, services, and government. See Table 4.2. While T.C.P.U. comprises almost one-third of both Kansas City sub markets, field research suggests that the character of this sector in the two sub markets is quite different. Kansas City's international airport is located in Platte County. There are a significant number of spin-off reservation and related data processing (labor intensive) employers in the county, occupying large floor plate, business park type space. On the other hand, Johnson County's T.C.P.U. employment is much more capital intensive and relates to telecommunications rather than transportation. Employers like AT&T and Sprint occupy campus style Class-A space in 100 percent locations.

The lack of volatility associated with T.C.P.U. and service sectors, which combined comprise 65 percent of total employment, is a strength of the Kansas City economy. Differences between the two types of T.C.P.U. in each sub market should be assessed to understand whether they represent a stable employers in their respective counties.

Oakland and Macomb County exhibit comparatively high shares of manufacturing employment to Kansas City's T.C.P.U.. The manufacturing component of the two Detroit sub markets is clearly auto and auto-related suppliers. While both counties can claim the presence of the "Big 3" domestic auto makers, Oakland has captured the large integrated technology/engineering centers. Macomb has the stricter manufacturing operations. Qualitatively, four out of five jobs in these two counties are said to be auto related. Even Oakland's particularly high share of services (35 percent) are spin-off auto-related services. Lastly, Oakland's share of F.I.R.E. is higher than the other four sub markets.

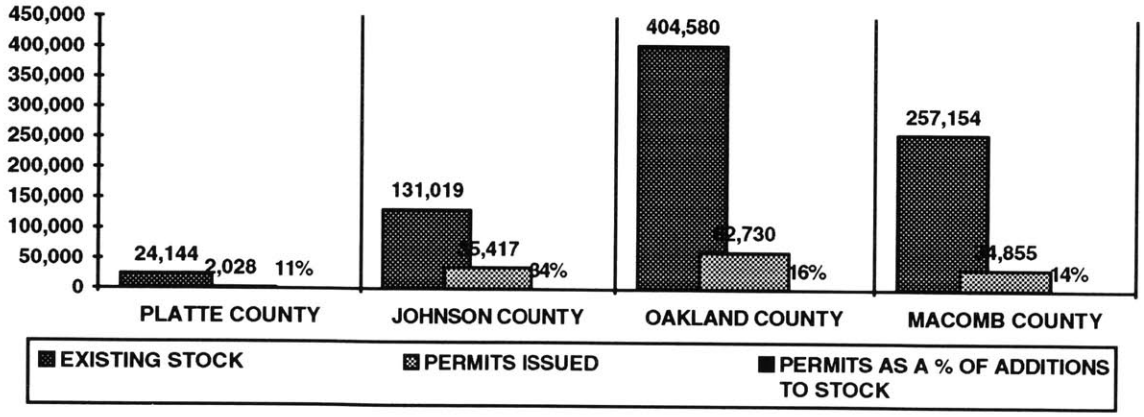
Oakland County's high service content, coupled with the sector's low volatility, suggests at a stable pool of demand for the area. Even though the wage rates associated with the sector are much higher than maximum LIHTC projects allow, the project would indirectly benefit from spin-off, population-serving trade jobs that are created as a direct effect of the growth in the service industry. On the other hand, Macomb County's high manufacturing content, coupled with the sector's high volatility, are a potential cause for concern since a steady pool of demand is highly uncertain in the area.

Table 4.2
1989 % EMPLOYMENT DISTRIBUTION
4 SUB MARKETS

Industry Sector	Platte County	Johnson County	Oakland County	Macomb County
Total	100.00%	100.00%	100.00%	100.00%
Agricultural	3.56%	3.58%	0.13%	0.37%
Agricultural Services	0.73%	0.61%	0.69%	0.75%
Mining	0.03%	0.00%	0.14%	0.09%
Construction	4.39%	4.52%	4.39%	5.15%
Manufacturing	5.24%	4.65%	**14.37%**	**31.29%**
T.C.P.U.	**33.48%**	**36.77%**	2.46%	2.09%
Wholesale Trade	4.49%	4.03%	6.56%	3.36%
Retail Trade	**11.87%**	**11.26%**	**19.69%**	**18.76%**
FIRE	4.55%	4.45%	**9.10%**	4.56%
Services	**22.49%**	**21.39%**	**34.99%**	**22.2%**
Government	**9.17%**	**8.74%**	**7.50%**	**11.39%**

Supply. Platte County added approximately 2,000 residential units between 1980 and 1989, representing approximately eight percent of the 24,144 housing stock base in 1989 (See Table 4.3). The county's lower share of additions to the housing base relative to the metro area's (21 percent) reflects an older housing supply in the county. With about five times the housing base of Platte County, Johnson County added 35,400 units between 1980 and 1989, representing approximately 27 percent of the 131,000 housing base in 1989. In contrast to Platte County, Johnson County's higher percentage of additions to the base (27 percent) relative to the metro area reflects the county's newer supply.

Table 4.3
SUPPLY BASE/
GROWTH
4 SUB MARKETS
1980-1989



Oakland County added approximately 62,700 units between 1980 and 1989, representing approximately sixteen percent of the 404,500 housing base in 1989. Macomb County added approximately 34,800 houses between 1980 and 1989, or approximately fourteen percent of the 257,000 housing base in 1989. Both counties share of additions to their respective stock base are

higher than the metro average of eight percent between 1980 and 1989. Therefore their supply is newer than the metro area's.

Of total permit issuances over the same time period, the share that was multi-family is similar in the four sub markets.

Sub market	1980-1989 Total Permits	1980-1989 MF Permits	% MF of Total Permits
Johnson County	35,417	19,217	54%
Platte County	2,028	1,007	50%
Oakland County	62,730	27,992	45%
Macomb County	34,855	18,224	52%

All four sub markets are permitting a higher percentage of multi-family product than their respective metro areas, where the Kansas City averaged 44 percent (as compared to Platte and Johnson County's 50 and 54 percent) and Detroit averaged 43 percent (as compared to Oakland and Macomb County's 45 and 52 percent).

Volatility measures are not valid in sub market feasibility research because the short time horizon does not consider an entire market cycle.

4.1.2 Direction of Growth

Demand. Johnson and Platte counties represented 22 and two percent of the metro area's employment base in 1980 and 59 and ten percent of the metro area's employment growth between 1980 and 1989. See Table 4.4. Oakland and Macomb counties represented and two percent of the metro area's employment base and . Both counties capture of employment growth well

exceeded their share of the employment base, respectively. All four areas are capturing well in excess of their share of jobs.

Table 4.4
Demand Fair Share Index
1980-1989

Sub market	1980 Total Emp.	% of Metro Total	1980-1989 Emp. Growth	% of Metro Growth	Fair Share Index
Johnson County	125,607	20%	85,470	64%	3.20
Platte County	12,670	2%	14,560	11%	5.50
Oakland County	407,375	24%	137,025	66%	2.75
Macomb County	279,675	14%	77,125	37%	2.64

Supply. Chart 4.5 reveals that with five percent of the housing stock base and only two percent of recent growth, Platte County is the only sub market that did not capture its fair share of new supply; the other three sub markets captured well in excess of their fair-share of total supply.

Table 4.5A
Supply Fair Share Index
1980-1989

Sub Market	1980 Total Stock	% of Metro Total	1980-1989 Total Permits	% of Metro Growth	Fair Share Index
Johnson County	101,016	22.55%	35,417	33.7%	1.49
Platte County	22,334	4.99%	2,028	1.93%	0.39
Oakland County	373,250	22.64%	62,730	46.97%	2.07
Macomb County	236,602	14.35%	34,855	24.17%	1.68

Multi-family permit trends in Table 4.5B suggest that all four areas are receiving their fair share of rental units.

Table 4.5B
Multi-Family Supply Fair Share Index
1980-1989

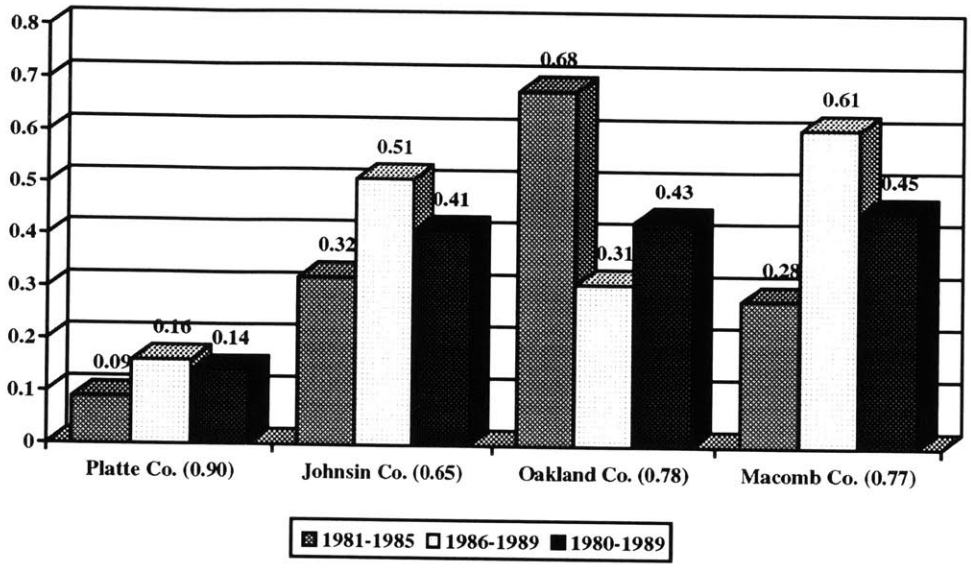
Sub Market	1980 Renter Stock	% of Metro Total	1980-1989 MF Permits	% of Metro Growth	Fair Share Index
Johnson County	30,769	9.56%	19,217	41.42%	4.33
Platte County	5,838	1.81%	1,021	2.20%	1.22
Oakland County	95,664	21.59%	27,992	45.34%	2.10
Macomb County	48,764	11.01%	18,224	29.52%	2.68

4.1.3 Conclusions Relating to Demand/Supply Imbalances

Per Table 4.6, all sub markets built less relative to employment growth (between 1980 and 1989) than their historical ratios (between 1960 and 1989).[5] Of the four sub markets, Platte County built the least relative to its historic ratio. With the exception of Oakland County, the three other submarkets built more between 1986 and 1989 than between 1981 and 1985, but still less than their historic ratios.

[5] Note that the historical ratios are located in parenthesis next to sub market names.

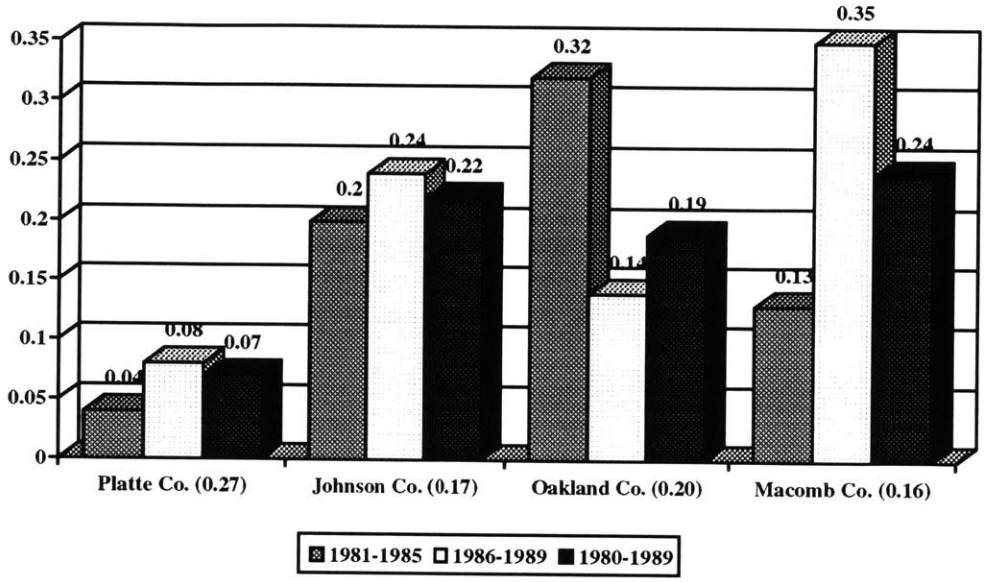
Table 4.6
TOTAL PERMIT/ EMPLO YMENT GROWTH RATIO
4 SUB MARKETS
1980-1989



The same analysis was conducted for multi-family supply relative to employment. Table 4.7 reveals that independent of the subject properties' locations or building programs within their respective sub markets, strict supply and demand conditions visually shown above suggest the following: Platte County is clearly under supplied with rental product; Macomb County is over supplied; Johnson County is oversupplied in the near term, but not to the extent of Macomb County; Oakland County is in equilibrium. As in the case of the total permit comparison, Oakland County is the only sub market that built more in the first half of the 1980s than the second half; the other sub markets built at an increased pace in the second half of the 1980s.[6]

[6] Ibid.

Table 4.7
MF PERMIT/ EMPLOYMENT GROWTH RATIO
4 SUB MARKETS
1980-1989



When coupled with information on their predominate industry sectors conclusions relating to the sub market's feasibility for rental investment can be made. They follow.

Platte County is a both an under built and low-risk sub market for investment in rental product. Demand conditions are strong and improving, as suggested by the sub market's employment growth capture in excess of its employment base as well as the by the stability (low volatility) of the county's primary industry sectors. Supply conditions are similarly favorable, since existing supply is older and little new supply has been introduced in the market place. When demand and supply conditions are overlaid between 1980 and 1989 for the purpose of detecting potential imbalances/opportunities for multi-family investment, rental demand appears to far exceed rental supply in Platte County.

- **Johnson County** is a slightly over built, but moderately low-risk sub market for investment in rental product. Demand conditions are strong and improving, as suggested by the sub market's employment growth capture well in excess of its employment base as well as the by the stability (low volatility) of the county's primary industry sectors. The county's high share of services and the character of its T.C.P.U. employment, however, would seem to produce wages in line with owner rather than renter demand. Income cohort analysis will be particularly important within the sub market to assess the level of qualified renters for LIHTC rental product. Supply conditions in the market reflect newer product and a recent uptick in rental building activity. While the rental market remains soft in the near term, conditions support feasibility of investment in the sub market. Under the country's competitive supply conditions, location will play a large role in determining a project's success or failure.

Like Johnson County, **Oakland County** is another moderate low-risk market exhibiting equilibrium conditions. Demand conditions are strong and improving, as suggested by the sub market's employment growth capture well in excess of its employment base, as well as the by the stability (low volatility) of the county's primary industry sectors. The sub market's lower share of manufacturing and higher share of services and F.I.R.E. relative to the metro area reflect its success at transitioning into more stable, higher growth sectors. However, these sectors' associated wage rates typically produce owner rather than renter demand. Like in Johnson County, income cohort analysis will be particularly important within the sub market to assess the level of qualified renters for LIHTC rental product. Furthermore, the county's potential for new supply after several years of tempered building activity will necessitate a strong location within the sub market to distinguish itself.

In contrast to Platte County, **Macomb County** is an over built and high risk sub market for investment in rental product. The county is highly dependent upon a volatile and declining sector (manufacturing) and has not successfully been able to shift into higher growth, stable demand sectors. Supply is relatively new within the sub market relative to the metro area, and recent building trends far exceed historic supply and demand conditions. This is particularly the case in the later half of the 1980s, where the recent ratio of building was four times the historic renter stock/employment ratio. Investment in multi-family product in the sub market cannot be endorsed.

4.2 Review of Original Research

The original sub market research varied between the two Kansas City deals and the two Detroit deals. The portion of the analysis evaluated in this section relates to the depth of demand and supply in the sub market. Information characterizing demand and supply, cohort analysis and findings on comparable is discussed in subsequent chapters. BFG conducted three of the four studies (two Kansas, one Detroit). RERC conducted the fourth.

4.2.1 Johnson and Platte Counties (Kansas City, CMSA)

The two Kansas City sub market reviews are analyzed simultaneously because they were produced from the identical template, with numbers substituted for each county. While an infrequent occurrence, any notable distinctions between the analysis are highlighted.

The data cited included: population, EBI, employment, residential trends, and commercial supply. When assessed against the above stated priorities of using the research to measure supply and demand imbalances, assess volatility, discern the direction of growth, and draw conclusions, the analysis lack internal focus and consistency

Supply/Demand Conditions

Similar to the metro section, the analysis discounts the importance of supply trends. Demand statistics are included and evaluated quantitatively, but supply information is largely introduced anecdotally making, it is impossible to assess demand and supply conditions.

Since the demand indicators on the sub market level are largely the same as those provided on the metro level, their short comings are duplicated at the sub market level: inaccurate population estimates are relied upon; EBI is cited instead of households; manufacturing employment is the only sector mentioned; and commercial trend information is largely descriptive of specific projects, their square footages, and tenants. Fundamentally, the report's attention is misplaced on detail rather than on providing an understanding of the stability and long term viability of the tenant base.

The only quantitative supply data included in the reports can be interpreted to suggest over building in both markets. Both studies refer to peak levels of multi-family building in the 1980s. A 90 percent occupancy statistic is cited for newer rental product in Johnson County. Other supply information discussed the proliferation of new for sale product in Johnson County, and the price characteristics of the affluent market. If related back to the feasibility of LIHTC development, the data begs question of from where the market for lower income product will derive.

Volatility measures are not valid in sub market feasibility research because the short time horizon does not consider an entire cycle of time.

Direction of Growth

Inconsistencies in measurements and time periods creates for difficult cross comparison between sub markets and the larger metro areas. Their examples from metro area to sub market follow.

	Metro Indicators				Johnson County				Platte County			
Indicator	**Base**	**Tot.**	**Ann.**	**Yrs.**	**Base**	**Tot.**	**Ann.**	**Yrs.**	**Base**	**Tot.**	**Ann.**	**Yrs.**
	#	%	%		#	%	%		#	%	%	
Population	1987		X	1950-1987	1970 - 1980 & 1988	X		1970 - 1980 & 1988	1970 - 1980 & 1988	X		1970 - 1980
Civilian Labor Force	1980		X	1980-1987								
Unemployment		X		Dec. 1987 & July 1989						X		May 1989
Labor Force Participation		X		Dec. 1987								
Effective Buying Income	Per Cap. 1970	X		1970 & 1987	1987	X		1981 - 1987	1988			
Retail Sales	Per Cap. 1987	X		1977-1987								
Manufacturing Employment			X	1977-1987	1966 & 1986		X	1966 & 1986				
MF Housing Construction	1987	% MF		1987	1984-1989			1984 - 1989				1985 - 1988

	Metro Indicators				Johnson County				Platte County			
Indicator	**Base**	**Tot.**	**Ann.**	**Yrs.**	**Base**	**Tot.**	**Ann.**	**Yrs.**	**Base**	**Tot.**	**Ann.**	**Yrs.**
	#	%	%		#	%	%		#	%	%	
For Sale Res.												
# of Sub.					X			?				
Avg. Sell. $					X			?				
Rental Occ.							X	?				
Rate												
Commercial												
Base-												
Office & Rtl.					X			?				
(existing and												
proposed)					X			?				

As presented, it is impossible to trend any variable or assess growth distribution.

Conclusions

Conclusions for Johnson County laud the affluence of the area rather than question the depth of local demand for low-income housing product. Specific quotes include:

> One of the most prosperous counties in the metro area...32 percent higher than the metro area's [EBI]; and
>
> Upscale bedroom community, attracting upscale professionals... adding to the existing base of higher income individuals.

EBI and for sale housing trends cited information that seemed incompatible with the profile of LIHTC projects. Instead the data was used to validate the quality of life the area offers.

Both the size of the existing commercial base and the amount of proposed retail and office supply are concluded to have "increased the employment base significantly," to the point where Johnson County represents:

> Recognized leadership in suburban office park development; and
>
> 75 percent of the entire suburban market

While this information is true, the character of employment is not communicated, i.e., is the employment growth the type that creates demand for LIHTC units? Furthermore, the county's share of the metro area's employment was never provided from which one could assess the size of their suburban office share.

The Johnson County analysis concludes that "the southern portion of the county is well positioned to be a leader in economic and residential development." Both would appear to be true based on the information provided. However, the growth in housing and jobs seem to be of a wage and price gradient much higher than that envisioned for subject site, i.e., where will the tenant base come from and where will they work? If they won't live or work locally, where is the project's advantage to being in this location?

Ironically, Platte County's analysis uses its "moderate" demographic trends to substantiate feasibility the project's feasibility. No other conclusions are drawn about the suitability of the area for rental, let alone LIHTC rental product.

Like Johnson County's commercial environment, the area is concluded to be "a recognized market for suburban office park development, which has expanded the employment base significantly." The character of this sub market's character is made clearer than Johnson County's; however, the employers mentioned all represent the same employment sector (T.C.P.U.);

unmentioned questions arise as to the area's dependence on, diversification from and stability of the sector.

Lastly, the market is openly referred to as over built and soft. It is expected to recover by mid 1990. No additional consideration seems to be given this fact. Furthermore, if proven a true time frame for the market to rebound, the timing would be a third to half into the project's holding period.

The Platte County analysis concludes that the area which was " once considered the 'sleepy' part of the region," is now considered "a force" in economic and residential development. This statement is sufficiently fuzzy to mean nothing. However, the data does provide enough of a glimpse into the sub market to appear to have more suitable demographics for LIHTC development.

Sources

The sources of data frequently unclear. Additional sources listed include the New Neighbor's Guide and the Apartment Association of Kansas City (AAKC). The former was published by the Chamber of Commerce, whose inclusiveness of new product or publication frequency could not be verified. Furthermore it is not clear whether the projects included in the guide are limited to those that purchase space. AAKC is considered an inclusive, reliable and frequently published source the apartment statistics.

As was the case with metro level data, much of the sub market data is available at a national level. Local employment statistics are an exception.

4.2.2 Oakland County Sub Market (Detroit, CMSA)

The two Detroit studies are discussed separately because they are entirely different: Oakland County's was conducted in house by BFG. The indicators cited included: employment trends and commercial development trends.

Supply/Demand Conditions

The report's sub market analysis relating to feasibility is minimal; total employment is included for the first time in the research thus far. Trends piece together data for an approximate 14-year period: actual 1979 to 1988, an 1989 estimate, and a 1990 and 1991-1992 projection. A growth rate is provided for 1989. No sources are provided except for a University of Michigan Study for the 1991-1992 projection.

The commercial development section highlights two types of development: large speculative projects currently underway, and large long-term build to suit projects. All project listed are related to the auto industry, which raises the issue of the area's dependence on, diversification away from, and stability of the auto industry. The Pontiac/Auburn Hills area in which the sub market is located, is cited as soon to have the largest concentration of jobs in the county. The statistic is dubious.

No other statistics are provided that approach the issue of supply and demand conditions.

The employment statistics provided were not analyzed with respect to volatility or stability.

Direction of Growth

The research asserts that a University of Michigan Study ranks Oakland County is the fastest growing county in Michigan. The basis of this finding (employment, population, housing, etc.) is not clear. This is the only statement that hints at Oakland County relative to a larger area.

Conclusions

No conclusions are drawn with respect to overall demand and supply conditions, the volatility of the market, or the sub market's context within the larger picture.

Sources

The University of Michigan employment projection was the only source listed. The quality of their research is considered to be excellent.

4.2.3 Macomb County Sub Market (Detroit, CMSA)

The Macomb County feasibility research was conducted by RERC. The indicators cited included: household growth figures, the unemployment rate, major employers, and a qualitative assessment of the area's suitability for investment.

Supply/Demand Conditions

Household trends are provided for 1980 and 1989 as a measure of demand. A 1989 estimate is being driven off of population estimates which are both some distance from actual Census years, and qualitatively assessed as "growing."

The economic base of the area is defined as "diversified with multiple employers," yet of the eleven major employers listed, six are automobile related, three government employers, and two are hospitals. Furthermore, employment opportunities are assessed as "growing" and the long term prognosis as "strong."

The data provided was not analyzed with respect to volatility or stability.

Direction of Growth

The household data was provided on both the sub market, metro area, and state level. Share could be calculated. However, nothing resembling share analysis was conducted.

Conclusions

No conclusions other than the assessments listed above were provided for the sub market.

Sources

No sources of information were listed.

Chapter Five

Positioning Framework

This chapter explores the theory, analysis, and data requirements behind evaluating a project's positioning. The application to the four case studies is withheld until Chapters Six and Seven, which examine its public data and qualitative field data components.

Positioning analysis relies on the feasibility findings in sub markets where under supply is determined to exist and analyzes the type or character of that demand to make well-informed building decisions. Positioning includes everything from determining target markets to building programs, specification, service, and amenity levels, and appropriate rent levels.

The scope of positioning analysis differs for to be constructed and existing projects. Since the majority of Boston Financial's deals are solicited from developers with approved credits to build a project, in theory most deals provide the opportunity to "tweek" the building footprint, if required. The positioning decisions for existing projects do not include determine building templates. Even in the case of constructing a new project, developers typically involve BFG with a pre-determined building program. While it may be unrealistic to rework entire programs at this stage, some degree of analysis on the "set-aside" election and building footprint should be conducted by BFG in order to validate anticipated household sizes, the market demand for the proposed unit mix, the livability of floor plans, etc. Findings that are related to the above could at most be finessed without significant time or expense and at least fore shadow potential problems that could anticipated and therefore marketed against from the outset.

Despite new or existing,, LIHTC projects can be argued to limit positioning opportunities more than market-rate projects because of their income cap limitations. However, their positioning becomes all the more relevant because their long-term viability is determined by their ability to attract a steady source of tenants that can afford to pay rent but cannot earn above a certain level, whereas market rate projects simply qualify for minimum income levels.

Since the choice of the site is not an option in either type of investment, the site's location should be recognized as being a primary determinant to defining the target market. This is particularly the case for rental projects, which are location driven to the extent of being highly limited in terms of geographic drawing power. Decisions like rent levels, amenity packages, and marketing programs should be perceived as devices which focus the viable pool of renters in an area, but lack the ability to redirect the demand pool outside of that area which makes commuting sense to renters. For-sale product has greater geographic drawing power because of the greater number of intangible variables that enter into the purchasing decisions.

Positioning is not merely a function of existing supply. Underlying structural demand trends that are revealed through demographics and cohort analysis may not be captured in local supply research. To this end, the components of positioning research include both that information available through public data sources as well as qualitative information that is garnered from field research with local supply, qualitative interviews with real estate professionals, and site findings.

5.1 Public Source Data

Public source data helps to characterize the underlying character of demand and supply. To this end, age and income cohort trends are analyzed. The latter are compared to maximum income levels permitted under HUD guidelines for each metropolitan area in an attempt to understand each sub market's ability to supply a steady source of income-qualified renters. Lastly,

housing characteristics are analyzed to understand the percentage of total renters in the sub market and to breakdown renter-occupied units by bedroom type.

5.1.1 Demand Conditions

It is important to recognize that the demand characteristics captured in existing supply do not necessarily reflect the actual depth or character of structural demand revealed by demographics. Their evaluation (like age and income cohort analysis and tenure characteristics) raises the positioning analysis above the limits of what existing built supply is capturing and helps to identify possible unserved building niches. For instance, quantitative findings may reveal structural support for a retiree rental market. Yet, local product may not be capturing a significant portion of retirees. The market question becomes one of why? The answer may be that the existing product was not built with retirees' needs in mind, e.g., the location could be out of walking distance to services, building programs could provide be two-level living, and the project citing could be on steep topography.

Age-Cohort Trends

Where the limits of Census data was able to be circumvented in feasibility analysis, positioning analysis requires the use of distribution trends that are only available through the Census. Like total population figures, population age-distribution trends are produced by the Census every decade.

Population age-distribution trends reveal the largest and fastest growing age bands living in both owner and renter-occupied housing units. The highest percentage of renters tend to fall under the age 34, with the highest percentage of those being in their early twenties. The older the population, the greater the likelihood of their becoming home owners. The percentage of renters

tends to rise slightly as persons nearing retirement decide to cash out of what is typically their largest equity investment for a lower maintenance lifestyle, and liquidity for health costs and other discretionary expenses.

Homeownership Rates by Age of Household Head

	% Renters	% Owners
25-34	55.7%	44.3%
35-44	33.5%	66.5%
45-64	21.9%	78.1%
65+	24.5%	75.5%

Source: DiPasquale/Wheaton; **Real Estate Economics** (to be published)

Despite the percentage of renter retirees, due to their increased mobility, it is the younger renters that provide a consistent source of new and turnover demand.

Renter Mobility Rates by Age

	Renter
< 25	56.8%
25-34	44.6%
35-44	32.8%
45-54	28.4%
55-64	19.6%
65+	12.2%

Source: DiPasquale/Wheaton; **Real Estate Economics** (to be published)

Household Income-Cohort Trends

Despite the fact that income qualification is determined at the metro level for urban projects, sub market median household income levels are also of particular relevance to LIHTC projects because they speak to the size of the local qualified pool of renters. The years cited on the sub market level should ideally be the same as the year in which the tax credits were issued.

However, like population age distribution trends, household income distribution trends are produced for the year prior at Census years as part of the General Population and Housing Survey. Despite the fact that three of the four project's credits were issued in 1989 and the fourth in 1990, income figures were not yet published for 1989 through the 1990 Census. Therefore, the 1989 estimates cited in subsequent tables are interim figures benchmarked from 1979 incomes. Based on the long time lag between 1979 and 1990, these cohort figures only provide a rough estimate of the sub markets' income composition, from which to assess the percentage of the percentage of the sub market that income qualifies to rent in LIHTC projects.

Household income distribution trends reveal the largest and fastest growing household income bands. While some percentage of renters' decisions are not driven by financial considerations, generally, renters generally originate from lower income brackets than owners. The more wealthy the household base, the greater the percentage of home owners.

Homeownership Rates by Income of Household Head

	% Renters	% Owners
< $20,000	51.7%	48.3%
$20,000-$29,000	41.7%	58.3%
$30,000-$39,000	32.0%	68.0%
$40,000-$49,000	25.1%	74.9%
$50,000+	24.5%	75.5%

Source: DiPasquale/Wheaton; Real Estate Economics (to be published)

Estimates of Income-Qualified Households within the Sub Market

When income cohort breakdowns as presented above are compared to maximum rents and income levels for the metropolitan area, an assessment of each sub market's ability to provide an adequate pool of qualified renters can be made. All four were elected as 40/60 projects; however the 20/50 election calculations are also provided to show the lower rents and corresponding lower income levels they allow.

5.1.2 Supply Conditions

Tenure statistics break out owner and renter housing units, providing an ability to estimate what percentage of new households will make the decision to rent. Renter occupied units can then be broken out by number of bedrooms. The sub market distribution of one, two, and three bedroom units offers an historic basis off of which to assess the proposed bedroom mix. For example, a project proposing to build only one and two bedroom units, when the sub market trends reveal an existing rental market of 35 percent three bedrooms should have justification in its supply findings to support such a divergence from the market.

5.2 Qualitative Field Research

Qualitative research applies general housing trends to rental product within the specific neighborhood under consideration. It includes an analysis of the tenants (or character of demand) within existing projects as well as an analysis of the physical characteristics of product built within the subject market area.

5.2.1 Demand Conditions

The tenant profiles in existing rental supply link the qualitative data (which includes both owner and renter pool) to specific comparable product renting within the subject site's vicinity. Comparability is defined by having the capacity to attract similar tenant profiles, in terms of age, income and place of employment, and is defined by the underlying character of demand occupying the units rather than the character of built supply. It is therefore not a supply but a demand term.

Often similar physical attributes (like age, feature and amenity level) tend to attract a similar profile, but the physicality of the building is not the driving force behind comparability. An example of comparability would be the tenants living in LIHTC or age restricted projects which may not be in the same metro market or offer similarly designed product, but which are comparable in their capture of a similar tenant base. The following variables assess comparability:

- Place of Employment
- Average income
- Average age
- Typical Household Size by Plan

- Residents Moving In:
  - % out of town/
  - % w/in metro/
  - % local/
  - % renting before/
  - % owning before/
  - % moving from parents'

- Current Residents
  - % young singles/
  - % room mates (students or military?)/
  - % young couples/
  - % two-parent families with children/
  - % single-parents with children
  - % empty nesters/
  - % retirees

- Residents Moving Out:
  - % continuing to rent apt/
  - % renting home/
  - % moving back with parents/
  - % buying home

- Typical children's age

Responses to age and income distribution inquiries are often resisted by leasing agents, who have been warned about NAACP and other anti-discriminatory advocacy agencies shopping projects as potential renters to detect discrimination practices. It is suggested that tenant composition questions are asked last, after a report has been established in conversation. Questions that remain unanswered about tenet composition can often be assessed by walking the project at several times in the day. The number of cars in the parking lot after the work day has begun are telling of the amount of non nine to five tenants. The number of children outside playing during after school hours is suggestive of the size and age children population. Additionally, parking stickers on cars parked at the property can hint at student and military populations living in the project. Car types, i.e., trucks and two-door "sports cars" versus mini-vans and four-door sedans distinguish between tenant populations.

5.2.2 Supply Conditions

Qualitative information about supply is primarily garnered from interviews at Competitive projects, which are considered competitive by definition because of their physical, namely locational attributes. An example of competitive supply would be two neighboring projects that are attracting entirely different markets, i.e., a LIHTC project and a lifestyle oriented rental community, but which compete by sheer nature of their close proximity to one another.

Sources of project names, locations, and phone numbers are usually available through "Apartment" and "For Rent" magazines and apartment locator services, as well as through local newspapers and the yellow pages. Driving the area is an excellent way of identifying projects. Sometimes planning agencies also provide lists of existing rental projects, with area maps, locations, and number of units built.

An attempt to identify relevant supply ideally becomes an attempt to identify competitive projects with comparable tenant profiles. Finding both comparable and competitive projects presents a problem in LIHTC research because: 1) competitive projects in age and location are often not comparable in income and employment profile, and 2) comparable projects in income and employment are often not competitive in age and location. The result is often a compromise, where either comparable projects (outside of the relevant market area) or older less maintained comparable projects (within the market area) are included in the analysis.

Existing projects should be analyzed with respect to the building program and resultant and current and historical performance. Factors on which comparability of a project would be assessed include:

- Project Size
- Asking/Effective Rents
- Unit Sizes
- Age
- Unit Mix
- Project Amenities
- Services
- Unit features
- Size of Staff
- Scope of marketing
- Qualifying standards

The usefulness of this combination of data is an understanding of: 1) the building programs that both work and do not work within the market and 2) the level of finish and "bells and whistles" required in the market.

Two other existing sources of supply that can compete with proposed product include the shadow rental market[7] and for-sale condominium conversions. The shadow rental market is defined as individually owned product this is being rented out. Shadow markets tend to be larger in older housing areas and tend to grow during times when resale markets are poor. Shadow markets

[7] Owned homes for rent by the owner.

provide particularly strong competition against larger rental units. In addition, unhealthy condominium projects are a potential source of competition, as developers will make decisions to lease units instead of sell.

Under construction and planned and proposed projects are potential sources of future supply. Their assessment is less clear cut than existing supply. Often local competition will be aware of any new projects under-construction that are not yet marketing in the local papers or magazines, but they are not typically aware of projects that have not yet broken ground unless they are new phases of already existing projects. Typically the local planning department is the most comprehensive way of identifying pipeline projects. The important issues are what is already approved for future multi-family development with and without permits? what is zoned, but not yet approved? and what is the political sentiment toward rezoning as multi family?

All areas have different approval processes, associated fees, which could vary between six weeks and three years in length, and between several thousand and up to $10,000 per unit in permitting and approval fees alone. An understanding of the amount of product in the pipeline, the jurisdictions attitudes to development, and the actual costs associated with pre-development is a good indicator of both the amount and the speed with which competition will arise.

While the planning department can point out specific parcels and provide the approval status, the general proposed building program, the applicant's name, and information about the projects' anticipated positioning in the market is best provided by the individual parcel owners. This can prove quite time consuming, often with few return phone calls, but is a particularly important part of research for large parcels or sites located close to the subject property.

Often other zoning restrictions or building guidelines, such as a land basis that requires building to a certain age, income level or density, help to define the competitive market. While perhaps helpful in that sense, it is important to recognize that the more numerous the restrictions, the less flexibility the property has to provide a strictly market-driven program.

5.3 Positioning Conclusions

Once individual analysis is conducted, considering each project's positioning relative to the others offers understanding of overall positioning rationale. A graph showing the position of each project relative to another could show a lost-leader strategy with the smallest unit operating in the market or it could show decreasing increases in price per square foot for larger units in a project, as reflected through a flattening curve. When the subject site is assessed against the market, its price/value positioning can be determined. A project positioning matrix, which plots square footage and rent of all projects against one another, is an effective visual tool for assessing price positioning. Projects whose slopes are out of whack with the market, or whose units offer similar value but smaller and less expensive rents are immediately evident.

Because a project's positioning becomes the building footprint off of which the revenue and expense assumptions are generated, too aggressively priced product, reflecting unrealistic lease up expectations, or over built product for which people are not willing to pay the necessary premiums, unnecessarily handicap a project from the onset.

LIHTC projects can be evaluated against both their maximum allowable level and market rents. While asking rents in LIHTC projects can never exceed Section 42 maximum rents, Section 42 maximum rents can and sometimes do exceed market rents. This is particularly the case with older market-rate projects leasing in the market. The spread between maximum

allowable and asking rents is often the cushion allowed to adjust rent positioning. For instance, one type of units popularity (or under supply) in the market could support maximum allowable Section 42 rents, whereas another bedroom type over supply could result in asking rents with significant discounts from maximum allowable.

Projects incorporate the competitive advantages/disadvantages of unit design and features and project amenities and services into price positioning. Therefore, walking models with agents and having them point out the relative desirability of details is important. Consumer research, where target market are given trade-offs from which to chose, is also an excellent way to define product and understand for what tenants are willing to pay.

Pricing decisions should be made by individual plan, say, where all two-bedroom units in the market are evaluated against one another in terms of size, location, finish level, anticipated profile, etc. The distribution of bedroom types in a market should be aggregated to understand their representation across the market. For instance, a neighborhood with half one-bedroom units in a sub market averaging 30 percent one-bedroom units begs questions. Is the character of employment in the local area or the character of the local tenant base different from the county? Or is the area simply over supply of one-bedroom units? Interviews at projects about their most popular units, concession histories by bedroom type, and occupancy by bedroom type typically provides an answer.

Grouping projects by criteria (old versus, new, free standing versus located in a planned residential community, or garden versus mid-rise) and calculating separate weighted averages (of occupancy, unit mix, size range, price range, and price per square foot) for each often reveals distinct positioning ranges for various types of product.

Chapter Six

Positioning Framework Applied to Public Data

This chapter critically evaluates the original positioning research conducted on four existing BFG deals in an attempt to learn from the market experience and the track record of the properties' performance in order to make better informed investment decisions in the future. The methodology adopted: 1) applies the analysis presented in the "Positioning Framework" introduced in Chapter Five to the quantitative analysis conducted for the positioning analysis of the case studies; and 2) and utilizes the findings as a framework for reviewing the original research.

6.1 Framework Applied

The following section analyzes trends outlined in the previous chapter and draws market conclusions without reference to the prior research conducted by BFG. This section provides a framework for reviewing proposed building templates, assessing their anticipated target markets, and reviewing their program.

6.1.1 Demand Conditions

Public source demographic factors relate to the structural character of demand for housing are analyzed in this section. Data is analyzed on the sub market level and compared to the local market wherever deemed necessary.

Since the due diligence on all four deals was conducted prior to the arrival of 1990 Census figures, 1980 figures (and where absolutely necessary, interim figures benchmark at 1980) are used.

Age-Cohort Trends

The age composition of all four sub markets is very similar in prime renter bands, where approximately 30 percent of the total population is between the ages of 18 and 34. Similarly, median age statistics all hover around 30. See Table 6.1.

Table 6.1
Age-Cohort Trends

	PLATTE CO.		JOHNSON CO.		OAKLAND CO.		MACOMB CO.	
Age Cohort	1980 Base	% of Total	1980 Base	% of Total	1980 Base	% of Total	1980 Base	% of Total
Less < 18	14,226	30.7%	78,665	29.11%	289,910	28.65%	207,459	29.87%
18-20	**2,310**	**5.0%**	**11,973**	**4.4%**	**49,371**	**4.9%**	**39,199**	**5.6%**
21-24	**3,012**	**6.5%**	**17,053**	**6.3%**	**72,033**	**7.1%**	**51,390**	**7.4%**
25-34	**8,671**	**18.7%**	**51,306**	**19.0%**	**173,290**	**17.1%**	**113,061**	**16.3%**
35-44	6,823	14.7%	36,930	13.7%	126,916	12.5%	85,354	12.3%
45-54	4,522	9.8%	29,358	10.9%	113,242	11.2%	78,601	11.3%
55-64	3,768	8.1%	24,340	9.0%	97,238	9.6%	66,041	9.5%
65+	3,009	6.5%	20,644	7.7%	117,888	11.65	53,495	7.7%
TOTAL	46,341	100.0%	270,269	100.0%	1,011,793	100.0%	694,600	100.0%
% of Prime Renter Age		*30.2%*		*29.7%*		*29.1%*		*29.3%*
Median Age in Sub Market	30.3		30.4		30.3		29.2	

Household Income-Cohort Trends

Per Table 6.2, in 1989 median household incomes within the four sub markets were estimated to range between $38,000 in Platte County to $43,500 in Oakland County. Both Platte and Johnson County exceed Kansas City's median income. While Oakland County also exceeds Detroit metro's median, Macomb falls slightly short of the metro median.

Table 6.2
Age-Cohort Trends

	PLATTE CO.		*JOHNSON CO.*		*OAKLAND CO.*		*MACOMB CO.*	
Income Cohort	*1989 Base*	*% of Total*	*1989 Base*	*% of Total*	*1989 Base*	*% of Total*	*1989 Base*	*% of Total*
< $15,000	*2,888*	*13.0%*	*14,019*	*10.3%*	*54,831*	*13.4%*	*39,770*	*15.0%*
$15,000-$19,999	*1,590*	*7.2%*	*7,993*	*5.9%*	*22,823*	*5.6%*	*18,421*	*7.0%*
$20,000-$24,999	*1,739*	*7.9%*	*9,850*	*7.2%*	*25,201*	*6.1%*	*19,215*	*7.3%*
$25,000-$29,999	*1,754*	*7.9%*	*10,239*	*7.5%*	*26,660*	*6.5%*	*19,142*	*7.2%*
$30,000-$34,999	*1,969*	*8.9%*	*10,573*	*7.7%*	*28,502*	*6.9%*	*20,304*	*7.7%*
$35,000-$39,000	*1,645*	*7.4%*	*9,830*	*7.2%*	*27,528*	*6.7%*	*19,459*	*7.3%*
$40,000-$49,999	*3,250*	*14.7%*	*18,117*	*13.3%*	*51,532*	*12.6%*	*37,977*	*14.3%*
$50,000	*7,308*	*33.0%*	*55,813*	*40.9%*	*173,410*	*42.2%*	*90,907*	*34.2%*
TOTAL	*22,143*	*100.0%*	*136,434*	*100.0%*	*410,487*	*100.0%*	*264,991*	*100.0%*
Median House-hold Income	*$38,174*		*$42,741*		*$43,406*		*$38,932*	

Estimates of Income Qualified Households per Sub Market

Both Kansas City projects under study, Willow Lake and Leawood Manor, qualified for credits in 1989. HUD's 1989 median income estimates published for Kansas City was $37,000. Based upon the 40/60 election chosen, the maximum income range for households of one to six persons ranged between $15,500 and $25,800. Corresponding maximum gross rents range between $389 and $644 per month. See Table 6.3. When compared to income cohort trends for the Platte and Johnson County sub markets the percentage of qualifying households is 28 percent in Platte County and 23 percent in Johnson County.

Table 6.3
Maximum Rent & Income Calculations
Willow Lake & Leawood Manor

1989 Median Inc. **Kansas City** $37,000

Set Aside Election			**40/60**	**Set Aside Election**			**20/50**		
Persons/ HH	**Max. Inc. Limit**	**Max. Gross Mo. Rent**	**Adj. Mo. Rent**	**Persons/ HH**	**Max. Inc. Limit**	**Max. Gross Mo. Rent**	**Adj. Mo. Rent**	**Income % Δ**	**Rent % Δ**
1	$15,540	$389		1	$12,950	$324		$2,590	$65
2	$17,760	$444		2	$14,800	$370		$2,960	$74
3	$19,980	$500		3	$16,650	$416		$3,330	$83
4	$22,200	$555		4	$18,500	$463		$3,700	$93
5	$23,976	$599		5	$19,980	$500		$3,996	$100
6	$25,752	$644		6	$21,460	$537		$4,292	$107

Oakland County		
% of HH Income Qualified	26.4%	21.45%
Macomb County		
% of HH Income Qualified	33.62	27.86%

The 20/50 election would have lowered maximum incomes (by $2,500 to $4,300 per year) and rent levels (by $65 to $107 per month), or approximately 20 percent across household sizes. Due to affluent nature of the sub markets relative to the metro income, the percentage of qualifying households decreases in both cases by between six and seven percent with the 20/50 election. Therefore, in both of these cases, the market advantage to lower rents is outweighed by restrictions the lower maximum incomes create.

One of the two projects located in the Detroit metro area, Oakview Square also qualified for 1989 tax credits. HUD's 1989 median income estimates published for Detroit metro was $39,900. See Table 6.4. Based upon the 40/60 election chosen, the maximum income range for households of one to six persons is slightly higher than Kansas City's and ranges between $16,600

and $27,800. Corresponding maximum gross rents range between $419 and $694 per month. When compared to income cohort trends for the Macomb County, the percentage of qualifying households was approximately 34 percent, significantly higher than both Kansas City's qualifying percentages. The increased share of qualified households can be attributed to the sub markets lower median income relative to the metro median.

Table 6.4
Maximum Rent & Income Calculations
Oakview Square and Hypothetical Example of Woodlake Hills

1989 HUD Detroit Median Inc. $39,900

Set Aside Election			**40/60**	**Set Aside Election**			**20/50**		
Persons/ HH	**Max. Inc. Limit**	**Max. Gross Mo. Rent**	**Adj. Mo. Rent**	**Persons/ HH**	**Max. Inc. Limit**	**Max. Gross Mo. Rent**	**Adj. Mo. Rent**	**Income % Δ**	**Rent % Δ**
1	$16,578	$419		1	$13,965	$349		$2,793	$70
2	$19,152	$479		2	$15.960	$399		$3,192	$80
3	$21,546	$539		3	$17.955	$449		$3,591	$90
4	$23,940	$599		4	$19,950	$499		$3,990	$100
5	$25,855	$646		5	$21,456	$539		$4,309	$107
6	$27,770	$694		6	$23,152	$579		$4,628	$115

Oakland County[8]		
% of HH income Qualified	**26.4%**	**21.45%**
Macomb County		
% of HH income Qualified	**33.62%**	**27.86%**

The 20/50 election would have lowered maximum incomes (by $2,800 to$4,600) and rent levels (by $70 to $115), or approximately 20 percent, across household sizes. The percentage of qualifying households decreases six percent; the market advantage to lower rents is outweighed by restrictions the lower maximum incomes create.

[8] Sample calculation is if Woodlake Hills' tax credits received were in 1989. Calculated for the purposes of showing the relative share of households that would have qualiified in 1989, since 1990 income figures were unavailable at the time the project's due diligence was conducted.

Woodlake Hills qualified for credits in 1990. Per Table 6.5, 1989 estimates are used as a rough proxy. HUD's 1990 median income estimates published for Detroit metro was $41,300. Based upon the 40/60 election chosen, the maximum income range for households of one to six persons ranges between $17,300 and $28,700. Corresponding maximum gross rents range between $434 and $719 per month. When compared to income cohort trends for the Oakland County, the percentage of qualifying households was approximately 30 percent, higher than both Kansas City sub markets and lower than Macomb County.

Table 6.5
Maximum Rent & Income Calculations
Woodlake Hills

1990 Detroit Median Inc.		**$41,300**							
Set Aside Election			**40/60**	**Set Aside Election**			**20/50**		
Persons/ HH	**Max. Inc. Limit**	**Max. Gross Mo. Rent**	**Adj. Mo. Rent**	**Persons/ HH**	**Max. Inc. Limit**	**Max. Gross Mo. Rent**	**Adj. Mo. Rent**	**Income % Δ**	**Rent % Δ**
1	$17,346	$434		1	$14,455	$361		$2,871	$72
2	$19,824	$496		2	$16,520	$413		$3,304	$83
3	$22,302	$558		3	$18,585	$465		$3,717	$93
4	$24,780	$620		4	$20,650	$516		$4,130	$103
5	$26,762	$669		5	$22,302	$558		$4,460	$112
6	$28,745	$719		6	$23,954	$599		$4,791	$120

The 20/50 election would have lowered maximum incomes (by $3,300 to $4,800) and rent levels (by $72 to $120), or approximately 20 percent across household sizes. Again due to affluent nature of the sub markets relative to the metro income, the percentage of qualifying households decreased seven percent. Therefore, as with the other three cases, the market advantage to lower rents is outweighed by restrictions the lower maximum incomes create.

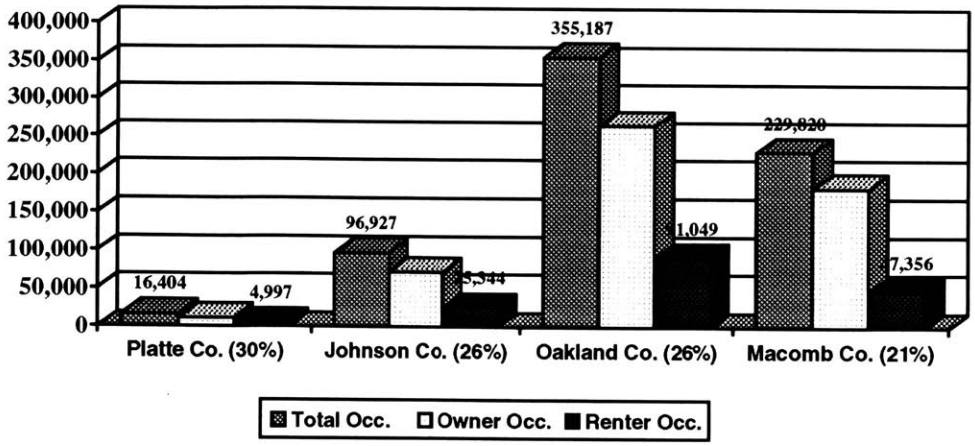
6.1.2 Supply Conditions

Public data source demographic factors that relate to the character of existing supply for housing are analyzed in this section. Data are analyzed on the sub market level and compared to the local market wherever deemed necessary.

Housing Tenure Trends

Tenure by sub market reveals distinct differences between the four sub markets. Per Table 6.6, the percentage of renter-occupied housing units ranges between 20 and 30 percent. Macomb County has the lowest percentage and Platte County the highest percentage. Both Johnson and Oakland County average 26 percent.

Table 6.6
Occupied Housing Units by Tenure



Rental Housing Tenure by # of Bedrooms

When renter-occupied units are broken out by number of bedrooms, all four markets have a majority of two-bedroom units. The percentage of studios and four- and five-bedroom units compare similarly across sub markets. The primary difference in composition is each sub market's share of one and three-bedroom units, for example, the two Detroit sub markets have a higher percentage of one bedroom units (38 percent) than the two Kansas City sub markets (23 and 27 percent) and the two Kansas City sub markets have a higher percentage of three-bedroom units (19 and 21 percent) than the Detroit sub markets (13 and 15 percent). See Table 6.7.

Table 6.7
Renter Occupied Housing Units
by # of Bedrooms
1980

	Total Units	% Studio Units	% One Bdrm. Units	% Two Bdrm Units	% Three Bdrm. Units	% 4 & 5 Bdrm. Units	1989 Median Rent
PLATTE Co.	4,997	3%	23%	51%	19%	4%	$412
JOHNSON Co.	25,344	2%	27%	46%	21%	6%	$509
OAKLAND Co.	91,049	2%	38%	44%	13%	3%	$507
MACOMB Co.	47,356	2%	38%	42%	15%	3%	$453

Source: US Census; Detailed Housing Characteristics

Despite this difference in weighting toward larger units in Kansas City, the median monthly rents between Johnson and Oakland Counties (both the high end, white collar employment suburbs in their respective markets) differ by only two dollars ($509 and $507). Macomb County's median rents are significantly lower at $453 per month, and Platte County's are the lowest at $412 per month. This would suggest that Detroit has a higher overall rent per square foot than Kansas City.

6.2 Critique of Original Research

In all four cases, the major shortcoming is that no conclusions are drawn related to the character of demand and supply. Statistics are cited but are not directed to the underlying issues of what should be/should have been built.

6.2.1 Willow Lake (Platte County)

While original sub market research varied between the Kansas City and Detroit projects. The portion of analysis evaluated in this section assesses the character of demand and supply in the sub markets as they relate to the proposed or existing building program. Qualitative findings

related to field research and specific projects renting the market is discussed the in the next chapter. As mentioned in the feasibility sections, BFG conducted three of the four studies and RERC the fourth (Oakview Square).

The only qualitative information provided related to supply and demand characteristics is mention to income levels "that are consistent with the county average." Specific reference to the actual median county income is made in the research's capture analysis exhibit, whose objective is to measure the capture of the total qualified households in the area to a subject site capture.

In the exhibit rental tenure is estimated at 35 percent of the market area, which is inconsistent with published 1980 tenure statistics for Platte County that reflect only 30 percent of all households renting. This would suggest that a higher capture of the market area than estimated in the research is necessary to fully occupy the project..

The capture analysis further used estimates of local (as defined by tax map codes not defined in the research) tenure to calculate the percentage of local capture necessary to occupy the project. Independent of their accuracy, the neighborhood capture is stated to be amongst the lowest in BFG's portfolio, which is said to be "reflective of a growing area and a moderate income neighborhood.

Lastly, the capture analysis never relates base number of qualified households to a percentage, or provides cohort trends from which to calculate share. As a result, it is impossible to assess where the depth of demand is relatively shallow or deep, or to compare qualified pools across areas since the size of sub markets' bases is so variable.

No other data related to age cohorts or household characteristics are presented.

6.2.2 Leawood Manor (Johnson County)

Population and income statistics are provided on the neighborhood level.

Population estimates for Leawood are provided as having grown from 12,000 to 17,000 between an undefined period beginning in 1975; the interpretation of these statistics relative to the character of demand is that (unlike in Overland Park), the growth has occurred in the area of large-lot subdivisions rather multi-family development. Population estimates provided are irrelevant to the conclusion drawn. Regardless, the conclusion admits that Leawood is a single family location. No concerns about the housing character are noted in the report.

Per capita income in Leawood Manor's neighborhood is cited as being the highest in Johnson County, where the entire "region" (unclear reference) averaged below $10,000. The statistics float, with no commentary about the appropriateness of locating LIHTC product in the area, about likely employment locations, or the projects accessibility to public transportation. No cohort analysis was provided.

As in the case of Willow Lake, the only specific reference to the county's median household income is made in the capture analysis, where the link to the percentage of income qualified households is made. The rental tenure is estimated at 35 percent. This is inconsistent with published 1980 tenure statistics for Johnson County, which, reflect that only 26 percent of all households rent, suggesting that the subject site capture would have to be larger than the estimated five percent of total qualified households to fully occupy the project.

The capture analysis further estimates local tenure as well as the percentage of local capture necessary to occupy the project. Independent of accuracy, the local capture estimates are cited to be the highest in the BFG portfolio. The reset justifies the high percentage as not

indicating lack of feasibility, but "reflect[ing] a growing area and a narrowly defined neighborhood...[further necessitating] sensitive initial pricing and creative marketing."

Instead of discounting the high local capture, the analysis should have been recognized as an indicator of an unqualified local pool of demand. The mere difference between Platte and Johnson County's local capture (11 and 58 percent) illustrates the difference in the appropriateness of locating LIHTC projects in the two local areas.

6.2.3 Woodlake Hills (Oakland County)

No quantitative data is presented on age, income, or housing characteristic trends. As in the case of the other two projects, no capture analysis is conducted.

6.2.4 Oakview Square (Macomb County)

RERC's report is entirely different than the other three studies. No cohort analysis is conducted from which to assess the character of the market area. No analysis to quantify the qualified pool of demand is conducted.

Chapter Seven

"Positioning Framework" Applied to Qualitative Field Data

The qualitative field data portion of the positioning analysis effectively relates the findings in the public data section to rental product in the subject property's vicinity. Qualitative field research often supplements the research with "lessons learned" from other projects renting in the market as well as with the perspective of local real estate professionals conducting business in the market on a daily basis. Its value is often that of "testing" the validity of ideas and findings found from prior data analysis and preparatory phone research.

7.1 Framework Applied

The following section analyzes trends outlined in the previous chapter and draws market conclusions without reference to the prior research conducted by BFG. This section provides a framework for reviewing proposed building templates, assessing their anticipated target markets, and reviewing the pricing program.

7.1.1 Demand Conditions

Qualitative field research that is presented in this section relates to the character of demand represented in existing rental product in the vicinity of the subject site in at the time the investment decision was under consideration. The information gathered and analyzed was on the local level, where comparability can be assessed through tenant profiles.

Willow Lake (Platte County). Willow Lake is located in Northeastern Kansas City, along I-29, the major north-south interstate, in that portion of the metro area, between downtown and the Kansas City International Airport. The project's freeway visibility and access affords it access to a tenant pool and employment base that extends along the arterial, beyond the local neighborhood radius.[9]

There were two distinct employment markets capturing tenants in the in this portion of the county. Independent of the market capture in the subject property, one segment of the market was capturing people who work south in northern Kansas City and Downtown markets. These tenants tended to be salaried singles and couples (without children), holding service and government jobs, with annual incomes averaging $30,000 to $40,000 (in 1993 dollars). Single parents tend to be fathers whose children visit on the week ends. The average age is in the early 30s. Approximately 75 to 80 percent had moved from within Platte County. Only five percent were moving from outside the metro area. The majority had a rental history and were moving out to purchase homes.

The other segment of the market was capturing people who worked in the immediate neighborhood or north toward the airport in hourly wage, retail and blue-collar jobs. Places of employment included the local restaurants, hotels, and grocery stores, the airport, and airline customer service installations. Examples of airport employers included: Braniff Airlines, Worldspan (reservationists); TWA Reservation Center; TWA Customer Service Overhaul Center; and Parsons Executive Branch (clerical).[10] Within this segment, there tended to be a notable percentage of roommates, unmarried couples, and single mothers with children. Income averaged $18,000 to $25,000. Included in this segment are construction workers temporarily living in Platte County while building a runway at the international airport.[11] The average age of

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[9] The local neighborhood consists of the Parkville/Gladstone area.

[10] Since late 1989, two of the four installations relocated to Atlanta, and another two closed down. Local projects lost approximately 10 to 20 percent of their tenent base over the past three years.

[11] The construction project was completed in early 1990. In some projects within the vicnity of the subject site, temporary construction workers were estimated to occupy as much as 15 to 20 percent of total units.

tenants were in the early 20s. Approximately 95 percent moved from within local Platte County. A number were first time renters, who would eventually move into other local rental projects or back in with spouses or parents.

Leawood Manor (Johnson County). Leawood Manor is located in southern Johnson County (just south of 150th), in an affluent residential community that serves executives working in the highly developed commercial core of Overland Park. The immediate Leawood neighborhood is considered a prestigious, executive housing location, where 98 percent of all housing is owner occupied and median household incomes exceed immediate $100,000. The area's otherwise rural surroundings and 10.5 mile distance to I-69 major north-south arterial connecting other less affluent employment cores, limits travel to surface roads. As a result, it is inconvenient to work in employment cores north of the congestion of Overland Park. Furthermore, the amount of competitive product on the north side of Overland Park creates for an unlikely rental decision for people working north. Another concentration of product farther west, along I-35, captures a price-sensitive segment working along the freeway at business parks in Olathe and Lenexa. and father north toward downtown..

The tenant base in the vicinity of the subject site[12] tends to be working in salaried white-collar jobs. Rather than the back-office, large floor plate type space that predominated the Platte County market, the employers in this portion of the Johnson County tend to be characterized by Class-A office space with smaller floor plates. Annual household incomes in rental projects average $40,000 to $50,000. Singles, couples, and families temporarily renting until they make a purchasing decision comprise the bulk of the market. Ninety percent of move outs either leave the metro area or decide to purchase a home. Approximately 60 percent have moved from within the local area. The balance have been transferred in from outside of the metro area. These statistics

[12] Neighborhood includes Leawood and Overland Park.

are startlingly distinct from Platte County's local market with internal turnover. On the other hand, Johnson County is receiving new growth and immigrating households. The average age is in the early 30s. The majority have rental history (many a homeownership history).

The segment of the south county market closer to I-35 holds much more of a likening to the upper end of Platte County's market, where commuting and the employment base is more freeway driven. Because of their greater dependency on the road network, employers are more manufacturing and R&D oriented and incomes tend to be lower than those in eastern Overland Park and Leawood.

Woodlake Hills (Oakland County). Woodlake Hills is located in on the eastern side of Oakland county, just within the northern border of the City of Pontiac. Annexed from the city in 1983, Auburn Hills, an emerging employment core, which borders the City of Pontaic to the east. Rental product within the local market area[13] travels either south into downtown Pontiac, or east into Auburn Hills. Both areas are dominated by the presence of the auto industry; however, their respective characters differ greatly.

As the county seat, the City of Pontaic historically had a presence, but was seeded as known today by General Motors in the 1950s when they located the World Trucking Headquarters and ancillary manufacturing facilities in the southern part of the city. Since its peak in the late 1960's, Pontiac has been losing employment share as a function of the wounded auto industry and national trends toward suburbanization. Meanwhile large concentrations of employment moved north of Detroit in the 1970s into Troy and Bloomfield Hills, which are just south of Auburn Hills. The area has become established to the extent of Tyson's Corner in suburban Washington, DC or Westchester County in suburban New York. While many of the employers are still auto related,

[13] The cities of Pontiac and Aubern Hills.

the types of facilities manufacturing employment represents is a shift in manufacturing employment in this portion of the county toward high tech, R&D, and engineering facilities. Other large employers are high tech services whose demand spun off of the auto industry. Pontiac has neither evidenced the same shift in manufacturing away from traditional production and warehouse functions, not has it experienced the same growth in services that the area east of the City has seen.

The growth and incorporation of Auburn Hills is an example of another wave of growth from the original suburbs in the 1980s. The project was also seeded by one of the "Big 3" auto makers; however, instead of the manufacturing installations that characterized earlier decades, Chrysler made this suburban office park home to its three-million square foot state of the art research and technology center. Today their complex employs several thousand people. Since its investment, the 1,100-acre community has grown to over 8,000 jobs, supported by capital-intensive manufacturing and service employers.

Rental product that services Pontiac and Auburn Hills is not clearly defined in the immediate proximity of the subject site. The distinction is clearer in product renting in downtown Pontiac or in eastern Auburn Hills. Across the spectrum, the tenant base range between hourly wage and salaried jobs. Household incomes range between $17,000 and $55,000, with those projects in Auburn Hills representing the higher end and downtown Pontiac represents the lower end. Qualitative interviews suggest that because of the poor reputation of the Pontiac school system, surrounding areas outside of the district capture a much higher percentage of children . For example, spot surveys in Waterford Township reveal almost three times the number of children in their communities than in Pontiac or Auburn Hills, which are both part of the Pontiac system. Otherwise, the market is characterized by singles, single parents with children, couples, small families and retirees. Within Auburn Hills, approximately 70 percent of the tenant base moved from within the local area. The balance moved from somewhere else within Detroit metro. Most move-outs reflect transfers or home purchasing decisions. Similar to Platte County, Pontiac and

Waterford township evidence an even higher percentage of local move ins, where fewer than five percent are moving in from outside of the local area. The households are new or temporary renters, who will eventually move out to rent at another project or move out to return to parents or spouses homes or apartments. The average age is in the mid 20s to the mid 30s.

Oakview Square (Macomb County). Oakview Square is located on the eastern side of the county, approximately two miles from the shore of Lake Michigan. The project's has immediate access to I-94, a major north-south interstate between downtown and the Port Huron and the City of Detroit (23 miles south). Besides the Selfridge Air National Guard base six miles south of the subject site, the major employment in the county is concentrated in the southwest corner of the county. Industrial concentrations follow north along Route 3 and I-53. The "Big-3" have a significant presence along these corridors. The character of the manufacturing employment is traditional, unlike Oakland County. Auto suppliers (i.e., plastic and glass fabricators) are concentrated slightly farther north and east along Route 3, farther east, toward the subject site. The market area of the subject property[14] is located even farther north and east in an area that has historically related more to recreation activities than to industry. While the subject property's freeway access affords it access to a tenant pool and employment base farther south, beyond a local neighborhood radius, both the proliferation of new product in between the subject site and concentrations of employment and the contraction of manufacturing jobs had created for extremely competitive supply conditions. In light of contractions in the auto industry, this subject property is located on the fringe.

[14] New Baltimier and Cheasterfields Township.

As a result, the market is capturing people who work in hourly wage jobs in the immediate area rather than pulling them from the south. Tenants' employers include local fast food restaurants, grocery stores, suppliers and fabricators located along Route 3, and boat shops. Approximately five percent of the tenant base is military personnel from the base. Annual median incomes average $20,000 to $30,000. They are typically comprised of singles, couples, and small families. The average age is in the mid 20s. Approximately 80 to 90 percent have moved from within the county. The majority have rental history. Few are moving out to purchase homes.

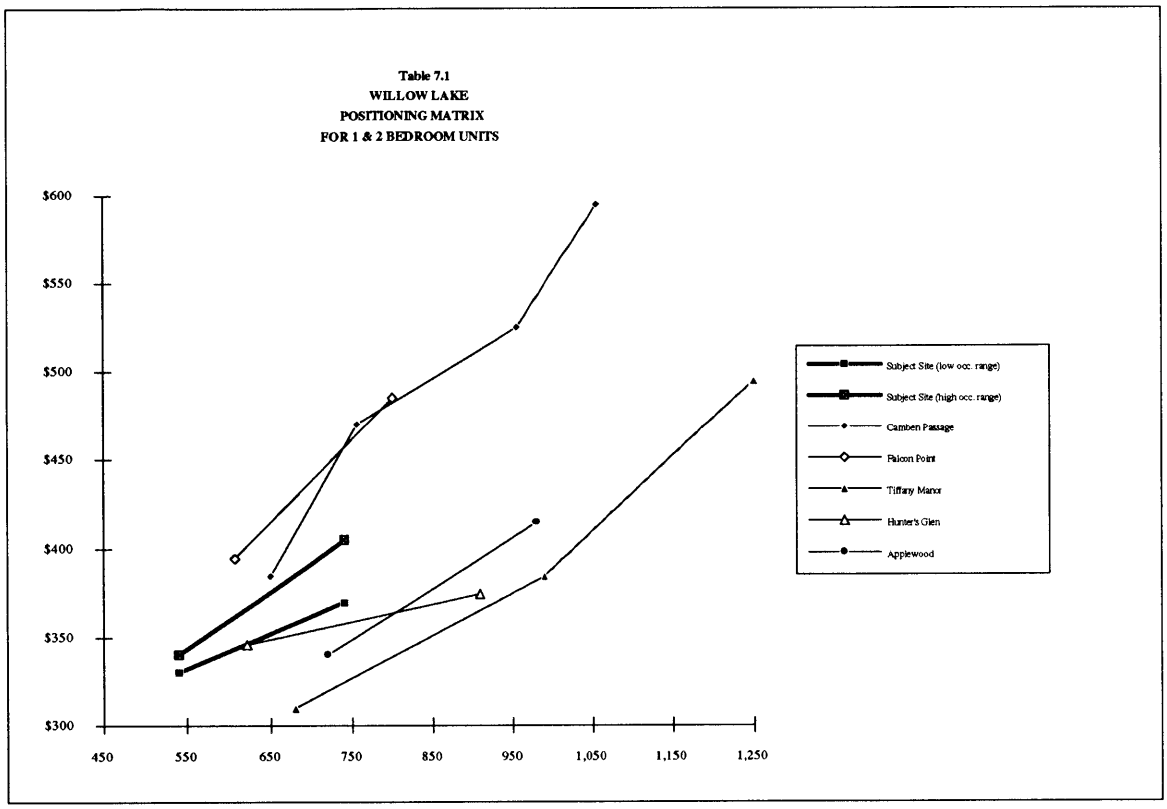
7.1.2 Supply Conditions

Qualitative field research that relates to the character of supply in existing rental product is presented in this section. The information gathered and analyzed was on the local level, where competitiveness can be assessed through the evaluation of product age, size, mix, rental rates, project amenity and service provisions, etc.

Platte County. Of the total rental units in Platte and Clay Counties, in August 1989, the AAKC surveyed approximately 85 percent as part of their quarterly metro-wide "Marketline" report. Over three-fourths of the units were located in Platte County. Overall occupancies in July for the two-county area averaged 82 percent, 3.5 points lower than the metro area. These figures were consistent across bedroom types. According to the survey, 80 percent of projects are averaging one-month's free rent metro wide. The national vacancy survey for the metro area revealed a much lower 8.8 percent annual average vacancy in 1988 for all renter-occupied product.

Approximately 1,117 projects deemed competitive were surveyed within the vicinity of the subject site. Three of the five projects were built in the early 70s. The newer product was built in the mid 1980s. Project sizes averaged 150 to 300 units. Per November 1989 rent levels, newer product was positioned distinctly higher than the older product. Overall, the market appears to

have a similar slope across projects. One project, Hunter's Glen appears to be charging a lower differential in value between one and two bedroom units than the rest of the market. See Table 7.1.



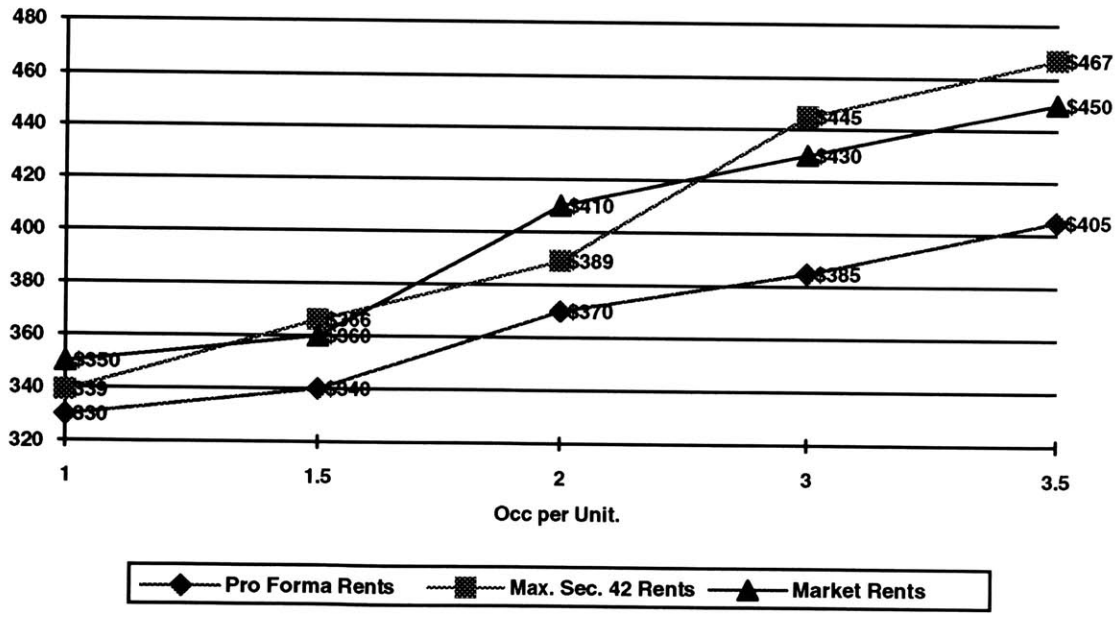
Across all one-bedroom units surveyed (excluding the subject site), projects averaged rents of $374 per month, square footages of 672, and rent per square foot of $0.56. They comprise 44 percent of total units in the market area.

Across all two-bedroom units surveyed (excluding the subject site), projects averages $456 per month, 947 square feet, and $0.48 per square foot. They comprise 49 percent of total units in the market area.

The positioning of studio units and three-bedroom units is not analyzed in depth since the subject property does not offer such units, however, their share of the market surveyed represents three and two percent, respectively.

When performa and maximum Section 42 rents are compared to market rents by number of occupants, it is immediately clear that while maximum Section 42 rents are higher than market rents at some occupancy levels, pro forma rents are in all cases lower than market rents. See Table 7.2.

Table 7.2
Pro Forma / Max. Sec. 42 / Market Rent Comparison
Willow Lake



Also note that the difference between pro forma and market rents tends to diverge as number of occupants increase, specifically in an occupancy range that suggests two-bedroom units. The differentials by # of occupants follow:

# of Occupants	Pro Forma / Max. Sec. 42	Max. Sec. 42 / Market Rents	Pro Forma / Market Rents
1.0 Occ.	-$9/-2.73%	-$11/-3.24%	-$20/-6.06%
1.5 Occ.	-$26/-7.65%	+$6/+1.64%	-$20/-5.88%
2.0 Occ.	-$19/-5.14%	-$21/-5.40%	-$40/-10.81%
3.0 Occ.	-$40/-15.58%	+$15/+3.37%	-$55/-11.69%
3.5 Occ.	-$62/-15.37%	+$17/+3.64%	-$45/-11.11%

Little can be interpreted about whether the proforma rent level contradicts or reflects market preference, since: 1) the project's share of one-bedroom units is in line with the sub market share; and 2) qualitative interviews did not suggest a healthy or concessionary two-bedroom market.

Qualifying standards consistently averaged three times gross income, with rental and employment history and credit check. Per 150 to 200 units, projects maintained a leasing staff of approximately two persons, one full-time maintenance person, and one full-time grounds person. The local "Apartment Guide," "For Rent Magazine," and the yellow pages were the main marketing vehicles. The higher-end projects are also listed with the Kansas City Apartment Locator Service. Newspaper advertising was not used.

The two newer projects are more highly amenitized than the three older ones. They tend to offer more extended amenity packages that include a sauna, tot lots, basketball and volleyball courts, and a higher level of unit features, including washers and dryers in the units, vaulted ceilings, and furnished apartments for short-term lease. In contrast, the older projects do not offer as extensive of an amenity package or washer and dryer hook-ups in the units. A pool, cable TV hook-up, a dishwasher and disposal, covered parking, a patio/balcony, and extra storage are included in all of the units.

Table 7.3
Amenity/Feature Matrix
Willow Lake

		[Older Projects			[Newer Projects]		
	Subject Site	**Apple-wood**	**Hunter's Glen**	**Tiffany Manor**	**Falcon Point**	**Camden Passage**	**Avg.**
Project Amenities							
Pool	X	X	X	X	X	X	100%
Club House			X		X	X	60%
Expanded Recreation			X	X	X		60%
Tennis Courts				X	N	X	40%
Unit Features							
Fire Place			X	X	X	X	80%
Laundry (W/D Incl.)				N	X	X	40%
Cable Hook-up	Y	Y	X	Y	Y	Y	100%
Vaulted Ceilings						X	20%
Dishwasher	X	X	X	X	X	Y	100%
Disposal	X	X	X	X	X	Y	100%
Covered Parking	X	X	X	X	X	X	100%
Patio/Balcony	N	X	X	X	X	Y	100%
Other							
On Bus Line	Y	Y	Y	Y		Y	80%
Extra Storage		Y	Y	Y	Y	Y	100%
Corp. Furn. Apts.					Y	Y	40%

X: Included; Y: Included, but not mentioned in analysis; N: Not included, but listed as included in analysis.

Qualifying standards consistently averaged three times gross income, with rental and employment history and credit check. Per 150 to 200 units, projects maintained a leasing staff of approximately two persons, one full-time maintenance person, and one full-time grounds person. The local "Apartment Guide," "For Rent Magazine," and the yellow pages were the main marketing vehicles. The higher-end projects are also listed with the Kansas City Apartment Locator Service. Newspaper advertising was not used.

Johnson County. Of the total rental units south Johnson County, in August 1989, the AAKC surveyed approximately 90 percent as part of their quarterly metro-wide "Marketline" report. Overall occupancies in July in south county for the area averaged 91 percent, six points higher than the metro area. These figures were approximately 90 percent one and two bedroom units and 92 percent for three bedroom units. Qualitative interviews suggest that within Johnson County, summer occupancies average four to five points higher than occupancies at winter lows. According to the survey, 80 percent of projects are averaging one-month's free rent metro wide. The national vacancy for Kansas City survey revealed a much lower 8.8 percent vacancy in 1988 for all renter occupied product.

Approximately 2,219 units deemed competitive were originally surveyed within the vicinity of the subject site. Four projects were built in the early 70s; however, the majority of newer product was built in the late 1980s. Project sizes ranged between 150 to 450 units. The newer projects tended to be the larger ones. Combined, this sample captures tenants working both along I-35 and in the Overland Park area.

Per 1989 rent levels, there visually appears to be less of a difference in positioning between older and newer product than evidenced in the Willow Lake sub market. With the exception of the two projects renting along the interstate, the other projects reflect a similar slope. See Tables 74.A and 7.4B. The subject property's positioning is amidst older product and on the low end of newer product.

Table 7.4A
Positioning Matrix (Older Product)
Leawood Manor

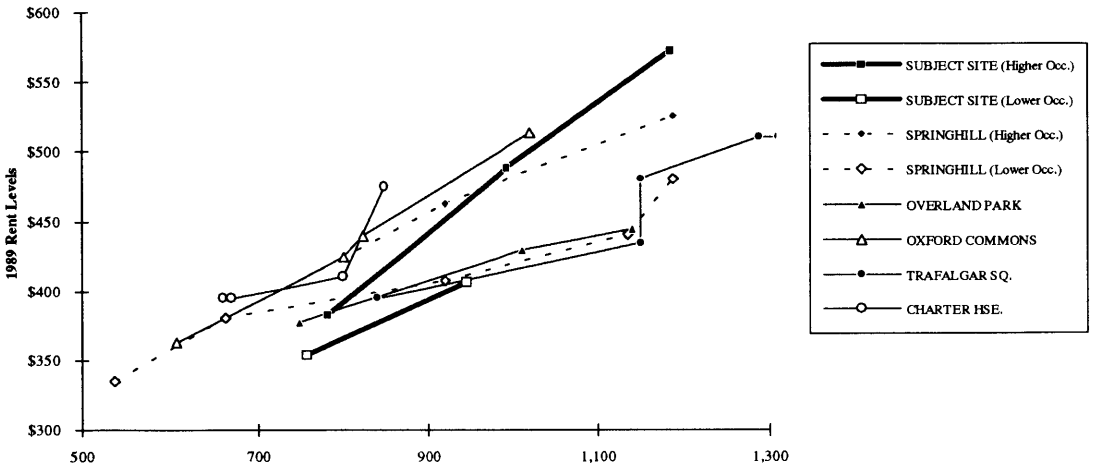
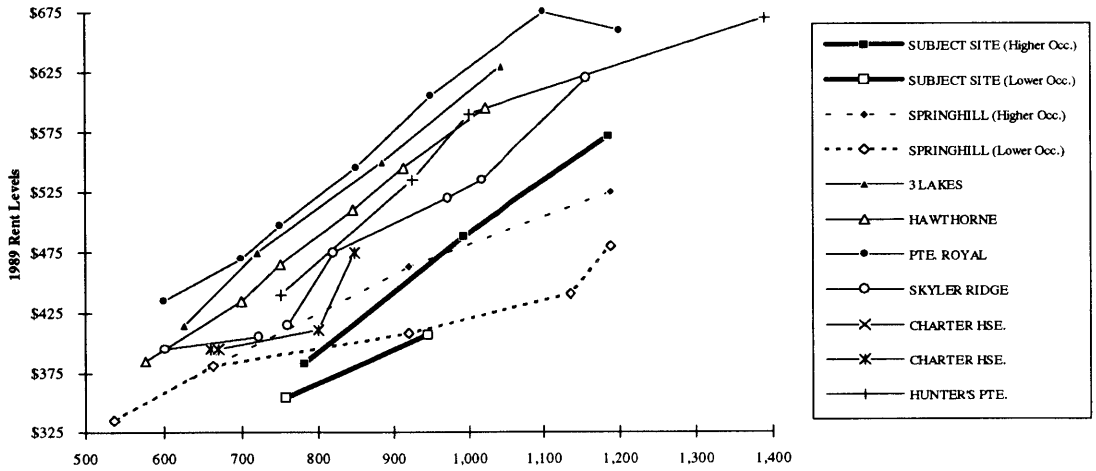


Table 7.4B
Positioning Matrix (Newer Product)
Leawood Manor



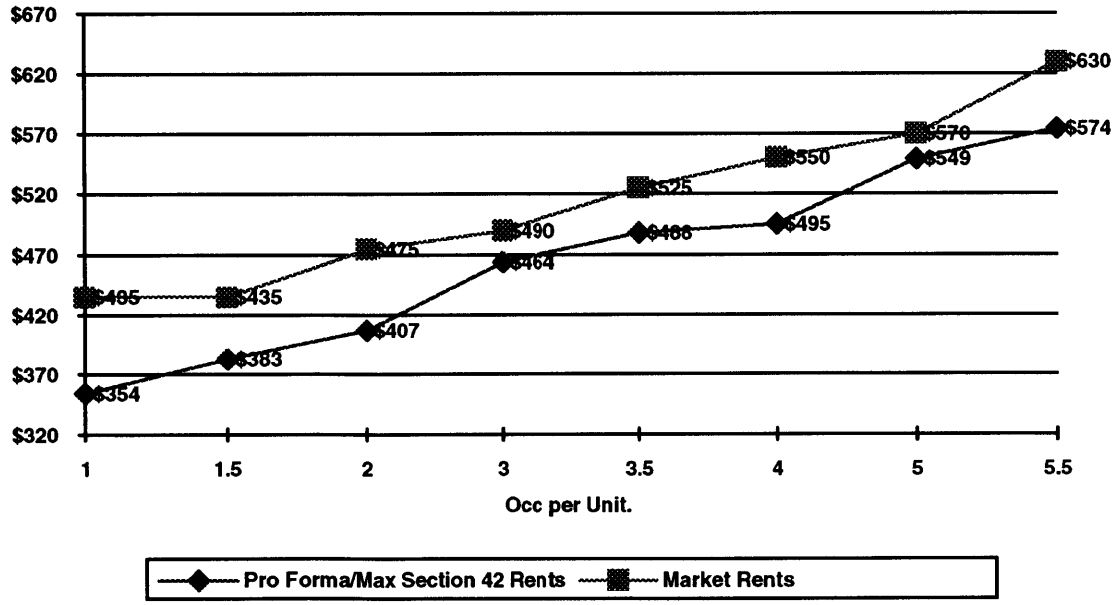
Averages across the Leawood/Overland Park one-bedroom units surveyed (excluding the subject site) are: $435 per month, 700 square feet, and $0.62 per square foot. They comprise 37 percent of total units in the market area.

Across all units surveyed the Leawood/Overland Park area (excluding the subject site and projects along I-35) rents averaged $524 per month, square feet average 954, and rent per square foot $0.55. They comprise 63 percent of total units in the market area.

Averages across the Leawood/Overland Park three-bedroom units surveyed (excluding the subject site) are: $573 per month, 1,257 square feet, and $0.46 per square foot. They comprise 11 percent of units in the market area.

Since maximum Section 42 rents are proposed as pro forma rents, Section 42 rents are not identified on the following chart. However, as in the case of Willow Lake, performa rents never exceed market rents. See Table 7.5.

Table 7.5
Pro Forma / Max. Sec. 42 / Market
Rent Comparison
Leawood Manor



However, in contrast to Willow Lake market rents and pro forma rents are converging the higher the number of occupants. The differentials by # of occupants follow:

# of Occupants	Pro Forma / Max. Sec. 42	Pro Forma / Max. Sec. 42 / Market Rents
1.0 Occ.	0%	-$81/-22.88%
1.5 Occ.	0%	-$52/-13.58%
2.0 Occ.	0%	-$68/-16.71%
3.0 Occ.	0%	-$26/-5.60%
3.5 Occ.	0%	-$37/-7.58%
4.0 Occ.	0%	-$55/-11.11%
5.0 Occ.	0%	-$21/-3.83%
5.5 Occ.	0%	-$56/-9.76%

Given the county's under representation in three bedroom units in the projects surveyed, it is logical that performa rents would rise toward market rents in larger occupancy units that would most likely represent three-bedroom units. Qualitative interviews suggests that the local rental market is under supplied with three-bedroom units.

Conversely, one-bedroom units in the market represent a higher share than the county average. Field research confirmed that one-bedroom have traditionally been slower to move in the market area. It is therefore understandable that one-bedroom units be positioned relatively lower than market rate units.

Per Table 7.6, the only consistent difference in older and newer projects is the option of vaulted ceiling on top levels. Otherwise all projects offer: pools, a clubhouse, a dishwasher and disposal, washer/dryer hook-ups, covered parking, and a patio/balcony. The majority offer extended amenities in the form of a weight room, spa, sauna, and a sport's court. A minority of units offer tot lots, or ceiling fans, vaulted ceilings.

Table 7.6
Amenity/Feature Matrix
Leawood Manor

		[Older Projects]		[Newer Projects				]	
	Subj. Site	OC	OP	HP	SR	PR	H	3L	SH	Avg.
Project Amenities										
Pool	X	X	X	X	X	X	X	X	X	100%
Club House	X	Y	X	Y	X	X	X	X	Y	100%
Expanded Recreation	X	Y	Y	Y	X	X	X	X	N	88%
Tennis Courts		Y	N	X	N	X	X	N		50%
Unit Features										
Fire Place	Y	Y		X	Y	X	Y	X-$	X-$	88%
Laundry (W/D Incl.)	Y-$		h/u	X	Y-$	X	X-$	X-$	X-$	75%
Cable Hook-up	y	Y	Y	Y	Y	Y	Y	Y	Y	100%
Vaulted Ceilings	X			X		Y		Y		38%
Dishwasher	Y	X	X							25%
Disposal	Y	X	X							25%
Covered Parking		X-$	X-$	X-$	X-$	X-$	X-$	X-$	X	100%
Patio/Balcony	Y	Y	Y	Y	Y	Y	Y	Y	Y	100%
Other										
Tot Lot	Y		Y		Y				Y	38%
Ceiling Fans						X				12%
On Bus Line		Y		Y						24%
Extra Storage			Y	Y	Y	Y	Y	Y	Y	88%

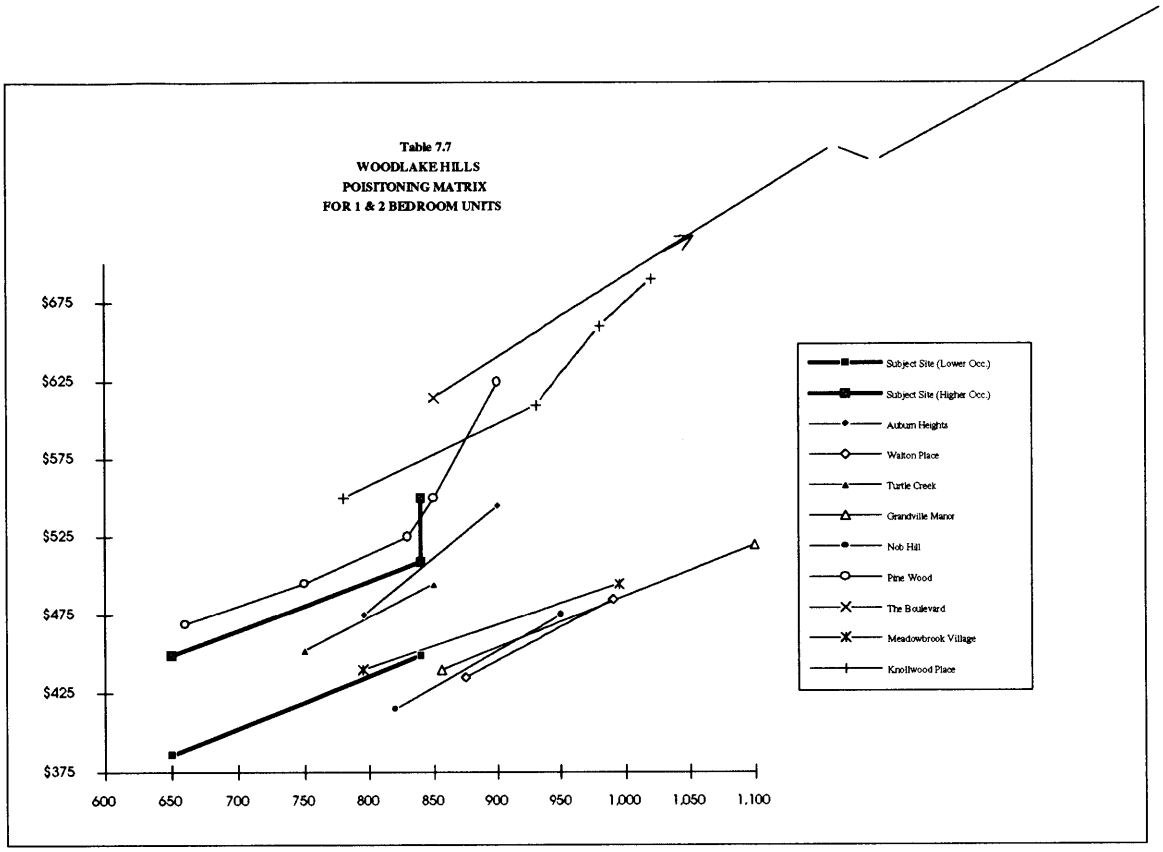
X: Included; Y: Included, but not mentioned in analysis; N: Not included, but listed as included in analysis; $: Available with additional monthly charge.

Qualifying standards range from three to three and one-half times gross income with rental and employment history and credit check. Per 150 to 200 units projects maintained a leasing staff of approximately two agents and one manager, one to two full-time maintenance persons, and one full-time grounds person. Local Apartment Guide and For Rent Magazine, the yellow pages, and the Kansas City Apartment Locator Service were the main marketing vehicles. Newspaper advertising was not used.

Oakland County. No local apartment association exists in the Detroit Metro market that tracks the health of the apartment sub market. However, the national vacancy survey, which reflects all renter-occupied product for the metro area reveals a 7.5 percent vacancy for 1989.

Approximately 1,747 competitive units were surveyed within the vicinity of the subject site. Some percentage were built in the early 70s. The majority of newer product was built in the late 1980s. Older competition is clustered west of Opdyke Road, within several miles of the subject site along Walton Road. Product east of Squirrel Road is newer and oriented toward the Auburn Hills community. Because of the stigma of the Pontaic school system that overlays both of these areas, older product in Waterford Township (just west of the City of Pontiac) capturing a much higher percentage of the family market than product within close proximity to the subject site. Overall, project sizes ranged between 100 and 250 units.

The two newer projects located east of Squirrel Road, are positioned much higher than the older product located along Walton Road and in downtown Pontaic. Per Table 7.7, all projects appeared to share a similar slope. The subject site is positioned amidst older product, well below the Auburn Hills project, The Boulevard.



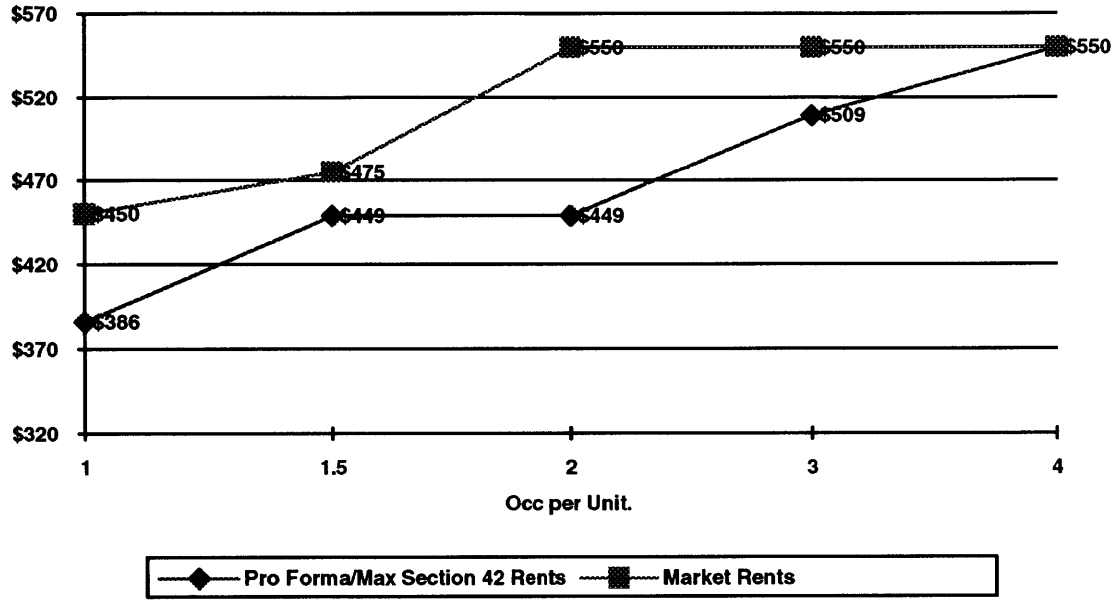
Averages across all one-bedroom units surveyed (excluding the subject site) were: $522 per month, 782 square feet, and $0.78 per square foot. One bedroom units comprised 28 percent of total units in the market area.

All two-bedroom units surveyed (excluding the subject site) averaged: $621 per month, 1,041 square feet, $0.60 per square foot. They comprised 66 percent of total units in the market area.

While the positioning of three-bedroom units is not analyzed in depth since the subject property does not offer such units, their share of the market surveyed represented less than five percent of the total pool of supply.

Since pro forma rents are set at the Section 42 maximum, they are not indicated on the following graph. Per Table 7.8, pro forma rents are lower than market rents to until the number of occupants reaches four persons.

Table 7.8
Pro Forma / Max. Sec. 42 / Market Rent Comparison
Woodlake Hills



The rent lines diverge most notably at the two occupant level. The differentials by # of occupants follow:

# of Occupants	Pro Forma / Max. Sec. 42	Pro Forma / Max. Sec. 42 / Market Rents
1.0 Occ.	0%	15.68%
2.0 Occ.	0%	5.79%
2.0 Occ.	0%	22.49%
3.0 Occ.	0%	8.06%
4.0 Occ.	0%	0.0%

Qualitiave interviews go little distance at interpreting the market advantages of such pricing; other than mention of too few three-bedrom units in the market (which the subject property does not offer) neither the one or two-bedroom market appears healthier.

Table 7.9
Amenity/Feature Matrix
Woodlake Hills

	Subj. Site	MB	AHD	WP	TC	GM	NH	PW	B	Avg.
Project Amenities										
Pool					X		X			
Club House		X	X	X	X					
Expanded Recreation		X	X	X					X	
Tennis Courts		X	X	X						
Unit Features										
Fire Place						X				
Laundry (W/D Incl.)			h/u						X	
Cable Hook-up										
Vaulted Ceilings										
Dishwasher					X	X				
Disposal					X					
Covered Parking										
Patio/Balcony					X					
Other										
Tot Lot										
Ceiling Fans										
On Bus Line										
Extra Storage										

X: Included; Y: Included, but not mentioned in analysis; N: Not included, but listed as included in analysis; $: Available with additional monthly charge.

Qualifying standards ranges from two and one-half to three times gross income with credit check. Requiring rental and employment history was not standard of all projects. Projects maintained a leasing staff of approximately two agents and one manager, a full-time maintenance persons, and a a half or full-time grounds person. Most projects advertised in the yellow pages and the *Oakland Press*, the County newspaper. The higher projects advertise in the Detroit Metro Apartment Shoppers Guide.

Macomb County. No local apartment association exists in the Detroit Metro market that tracks the health of the apartment market by sub market. However, the national vacancy survey, which reflects all renter occupied product for the metro area reveals a 7.5 percent for 1989.

Approximately five projects, representing 1,187 units were surveyed within the vicinity of the subject site. Four of the five projects ranged between 40 and 195 units. The fifth comprised 800. Their ages ranged between the late sixties to the late 1980s. all five projects were concentrated on either side of I-94, within two miles of the subject site. Additional product in the area included several other older, run down projects located closer to Lake Michigan, but they represent small four and five unit buildings with no notable leasing effort. Their distance from the free way and lack of amenities, would suggest that they are an entirely different market.

Positioning statistics on rents, square footages, unit amenities, or project features were neither supplied in original research nor attainable years later through field retrospective field research. No conclusions about the slope or price tightness of the market can be ascertained. Ranges by bedroom type, however, were provided.

One-bedroom units ranged (excluding the subject site) from $399 to $455 per month. Square footage's ranged between 656 and 726. resultant rents per square foot ranged between $0.57 and $0.63. Fewer than 15 percent of total units are one bedrooms.

Two-bedroom units ranged (excluding the subject site) from $465 to $630 per month. Square footages ranged between 810 and 984. Resultant rents per square foot ranged between $0.54 and $0.70. Approximately seven- percent of total units are two bedrooms.

While the positioning of three bedroom units is not analyzed in depth since the subject property does not offer such units, their share of the market surveyed represented ten percent.

Oakview Square's report did not conduct any capture analysis or draw any conclusions relevant to the subject property's positioning. Financial performae that are included in other portions of the investment committee package list assumptions from which some positioning information can be determined. Otherwise, the market research does not include rationale for the project's positioning.

Qualifying standards averaged three times gross income with credit check, rental and employment history is not standard of all projects. With the exception of the extremely large project, they maintained a leasing staff of one to two agents, a and a maintenance/grounds person. Most projects advertise in the yellow pages and the *Macomb Daily,* the County newspaper.

7.2 Critique of Original Research

The portion of analysis evaluated in this section relates original research findings about the character of character of demand and supply within the sub market to the qualitative field research findings and conclusions.

In all cases, information on tenant profiles is spare. Understanding of the current tenant pool, from where it derives, or from where it works can not be garnered from the research. On the other hand the research tends to be relatively strong in the area of identifying and characterizing supply.

Willow Lake (Platte County)

Location, school district, for sale and rental residential trends within the neighborhood, supply specifics, and discussion on pro forma rents are all included in the analysis.

The assessment of the subject site location and the surrounding neighborhood are correct. Willow Lake's location is described as being, just south of the center of Platte County's development patterns, within easy commuting distance of two employment areas (the airport and downtown). Commercial development is noted to be improving the appearance of the neighborhood. The combination of the development patterns and the central location are concluded to create a good neighborhood for moderate income housing. Reference to the appearance of the neighborhood begs additional description of the quality of the neighborhood and inaccurately creates the image of a blighted market area.

Significant emphasis is placed on the market area's quality, growing school district as an indicator of the people's confidence in the area. The results of the district's growth and people's confidence in the area are reasoned to be beneficial for rental housing; however, the link is never made to the implications of a good a school district being able to attract tenants with children.

The local for-sale residential market, where homes typically sell between 60,000 to 80,000 is effectively used to show the moderate pricing of the area. Specific discussion of two local

projects, one actively selling, the other in the pipeline, adds little to the discussion relating to the character of the area.

Supply analysis discerns between old and new product from the outset. Five projects were surveyed, which, given the amount of product in the local area, is too light of a sample size. However, research reveals that the five projects sufficiently illustrate the two profiles housed within the market's rental product. Rent ranges and rent per square foot ranges are listed by bedroom type for both older and newer product, showing their price differential.

The project chosen most comparable to the existing product renting at the subject site is Falcon Point, which is said to be most similar in terms of design and location. It is noted that this is particularly true for the lower priced units. Research suggests that this assessment is inaccurate. The project is the farthest away of the projects renting. It is one of the two project's whose tenant base travels south toward downtown. Of all of the projects, it is the farthest from I-19. Its rental rate structure is amongst the highest renting in the local market. lastly, its amenity and feature program is much more extensive than that offered at the subject site. Hunter's Glen, which is closest to the subject site and very similar in tenant profile, is a much better comparable.

Proforma rents are noted as being positioned both eight percent lower than market rents and eight percent lower than maximum section 42 rents, which are considered to fit well within the range for older and newer projects. The projects site, design, and amenity package are considered equal to older projects and inferior to new. No relationships between maximum Section 42 rents and market rents are drawn to assess where/if HUD maximums exceed market rents. Furthermore, no distinctions are drawn by unit or number of occupants to understand how the relationships change across units/number of occupants.

Leawood Manor (Johnson County)

Location, for sale and rental residential trends within the neighborhood, supply specifics, and discussion on pro forma rents relative to HUD maximum and market rents are all included in the analysis.

Leawood's location analysis is entirely mis-analyzed, where the areas reputation ("as the preferable place to live because of land use patterns of expensive homes and strong development controls, which limit multi-family and commercial growth") is provided as support for the project's viability.

At the point of the original research, Leawoood Manors location is introduced as "relatively undeveloped," "surrounded by rolling hills and a few developed lots." The description is immediate cause for concern about whether this site is a viable location for an apartment project let alone a LIHTC project, which relies on mandated low income to lease up. Its location in the southeast corner of Johnson County is further described as benefiting from State Route 150 as well as from the extension of Leawood as the preferred housing location for the area's most expensive homes. Since State Route 150 is a rural road with little development, it is unfounded to conclude that the project benefits from its proximity to this secondary east-west collector.

Lastly, since Leawood is known for highly restrictive zoning of commercial and multi-family residential development, expectation of the area changing "as plans come to fruition over the next two to seven years," appears a unlikely transformation. Lastly, the area is cited as being a good long-term investment because of its location in the center of two growth paths (that were never defined in the research and seem out of context given the character of the area described in the text several paragraphs prior).

The area's local for-sale residential market continues this line of logic by citing the area's home prices being between $165,000 and $450,000 (as compared to the Willow Lake area home prices of $60,000 to $90,000) as a positive element for Leawood Manor.

Supply analysis includes one LIHTC project in the market area. Nine projects were surveyed. The research reveals that they illustrate two profiles housed within the market's rental product, the Overland Park market and the I-35 freeway commuter market. The latter market is not a viable capture for the subject site, given its out of the way location.

The project chosen most comparable to the existing product renting at the subject site is Skyler Ridge, which is said to be most similar in terms of age and location. Research suggests that this assessment is inaccurate. The project is the not the closest to the subject site, is located adjacent to a large concentration of retail on three corners, and is of similar age to many projects surveyed in the market. The project is cited as: "having trouble because of its edge location and exposure at the height of over building" and as "proving the pitfalls in marketing a project without a special location in a soft market. The project is not only not built on an edge location, but is in the midst of Overland Park activity. Springhill, the only other LIHTC project in the market and its experience is clearly the most comparable to the subject site.

Rent ranges by bedroom for the projects surveyed are provided for both new and older product. While older projects offer more value on the low end than newer projects, the difference between the two is not as distinct as it was in Willow Lake.

The research cites no new product in the pipeline; however, a 1,000 unit project several miles from the site has been on county books since the early 1980s. The project broke ground on its first phase in 1990 and is currently building its second one. The project represents the higher end of new product in the market, but is as competitive as any surveyed. In addition, over 3,000 units are currently zoned, but not yet approved for multi-family development in the Overland Park area. The research never discussed potential future supply beyond stating that no new product was planned for delivery.

Pro forma rents are noted as being positioned both eight percent lower than market rents and equal to maximum section 42 rents. They are considered "to fit well within the range for market rate units, set at the midpoint of the newer product, and clearly above older, better located product. In fact, the project's positioning is below newer product and within the range of older product.

In addition, the project's site, design, and amenity package are cited as being equal to or better than all nine projects surveyed. Analysis does not entirely support this finding since the project does not offer covered parking as does the rest of its competition.

No relationships between maximum Section 42 rents and market rents are drawn to assess where/if HUD maximums exceed market rents. Furthermore, no distinctions are drawn by unit or number of occupants to understand how the relationships change across units/number of occupants.

Woodlake Hills (Oakland County)

Location, supply specifics, and discussion on pro forma rents relative to HUD maximum and market rents are all included in the analysis.

The project is correctly identified as being in the midst of a middle class neighborhood. It close proximity to "a well-maintained supply of urban and suburban type development," a school, park, and retail center are all cited as positive locational attributes for the development. However, a planned two-million square foot mega-mall several miles from the site was considered on one of the major demand generators for project. The report refers to the project as likely because it received approval. No mention of whether the project was financed was mentioned. To date, the project has not been able to secure financing for the project. Pro forma rents are noted as being positioned ten percent below market rents and equal to maximum section 42 rents. No commentary is offered about the pricing strategy or its positioning strategy relative to its amenity package, etc.

As in the other two projects, no relationships between maximum Section 42 rents and market rents are drawn to assess where/if HUD maximums exceed market rents. Furthermore, no distinctions are drawn by unit or number of occupants to understand how the relationships change across units/number of occupants.

Oakview Square (Macomb County)

Location, supply specifics, and discussion on pro forma rents relative to HUD maximum and market rents are all included in the analysis.

Supply analysis includes no LIHTC projects in the market area. Twelve projects were surveyed. The research reveals that local projects overlap two profiles housed within the market's rental product, the Auburn Hills and Pontiac market.

Rent ranges by bedroom for the projects surveyed are provided for both new and older product. Like product in the Willow Lake area, older and newer product are distinctively priced.

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Chapter Eight

Findings, Conclusions, and Recommendations

The objective of this research was to apply market lessons from case study research to BFG's future multi-family investment strategy. The thesis is conceptually divided into the feasibility and positioning components of evaluating a potential investment. The former assesses the depth of demand and supply conditions in an attempt to identify supply imbalances. The latter assesses the character of demand and supply to identify niches of unfilled demand. These two components are applied to each of four case studies, which were evaluated in terms of a proposed framework and a critique of the original market research conducted by BFG. To this end the scope of work included:

1) building a proposed framework for analysis with respect to theory, data, and analysis requirements;

2) applying the framework to the four projects at the point in time which the project was being considered for investment;

3) drawing conclusions about the feasibility or positioning of the subject properties' within their respective metro, sub market, and comparable market areas; and

4) critiquing the original BFG research in light of the above findings and conclusions.

The analysis produced findings and conclusions that can be applied to BFG's future multi-family investment strategy. Findings, conclusions, and recommendations are presented below.

8.1 Feasibility Framework Applied to Metro Analysis

8.1.1 Kansas City Metro

- **Employment can be considered to be a good indicator of longer-term demand conditions since employment trends have been both steady and dependable for the last 30 years.**. The Kansas City metropolitan market has added comparable shares to the total employment base each decade. The metro area's measure of relative volatility (coefficient of variation) was the lowest of the five areas analyzed in Chapter Two.

- **The metro area's primary employment sectors (services, retail trade, manufacturing, and government) vary in terms of their growth, volatility, and likelihood to produce renter demand.** Services, retail trade, and government represent the majority of the metro area's positive job growth; manufacturing is experiencing negative growth. Services and government exhibit stability over time, while manufacturing and retail trade exhibit high volatility. Retail trade, manufacturing, and government are likely to create a higher share of renter demand than the service sector, whose associated wage rates are higher than typical renter wages.

- **The metro area's secondary employment sectors (construction, F.I.R.E, and T.C.P.U) also vary in terms of their growth, volatility, and likelihood to produce renter demand.** Other sectors that comprise secondary shares of total employment are construction, F.I.R.E., and T.C.P.U, which exhibit high, moderate, and low volatility, respectively. Construction and T.C.P.U. (particularly the transportation and public utilities components, not communications) sectors are more likely to produce higher renter demand than the F.I.R.E. sector, which command similar wage rates to the service sector.

- **Similar to employment, permits issuances can be considered to be good indicators of longer-term supply conditions since they have exhibited steady growth over the last 30 years.** The Kansas City metro area has experienced a dependable pattern of housing growth, where their additions to stock have represented shares over time. While the volatility of permitting is much higher than employment, Kansas City's permit volatility fell in line with the other areas considered in Chapter Two.

- **Coupled with their steady growth over the past 30 years, multi-family permits have relatively lower volatility than total permits, which makes them a similarly good indicator of supply levels over time.** Multi-family permit issuance trends mirror total permit trends with the exception of the 1980s, where they accounted for a particularly high share of total permits.

- **Overall, the metro market exhibits low risk for housing development relative to the other metro markets considered in Chapter Two.** When overlaying supply and demand conditions, the metro market has been building at a close to historical ratio of permits/ employment growth for the past 30 years.

- **Although recent over building is causing some softness in the market for the short-term, longer term trends suggest stabilization.** Annual trend analysis reflects a rise in the proportion of multi-family permits between 1984 and 1986. The percentage growth in real rents tracked over the same period reveals that the growth in real rents began to fall accordingly in 1984. The consistency of long-term multi-family trends are not suggestive of continued levels of high supply.

8.1.2 Detroit Metro

- **The Detroit metro market contrasts sharply with the Kansas City metro market. Due to the employment's volatility and declining growth over the past 30 years, a constant or growing source of demand can not be relied upon.** Detroit is both the most volatile of five markets considered in Chapter Two and exhibited a declining pattern of total employment growth similar Cleveland and Pittsburgh.

- **The Detroit metro market is mature and transitioning slowly toward high-tech services, which are stable and high growth sectors; however much of this growth linked to the auto industry.** The primary components of its employment base are the same as Kansas City (services, retail trade, manufacturing, and government); proportionally, manufacturing comprises a much larger percentage in Detroit than in Kansas City. Both government and manufacturing sectors have been losing share over time; services and retail trade have been growing. Manufacturing is the only sector that exhibits high volatility; all other sectors (including retail trade) are relatively stable. The service sector is the only one of the four which tends to create more demand for home owners than for renters.

- **Permit issuances exhibit greater volatility than employment. Their declining pattern of growth from 1960 to 1989 suggest that supply can not easily be anticipated.** Detroit metro market has experienced a steadily declining pattern of housing growth. The volatility of permitting is much higher than employment and even higher than other areas considered in Chapter Two.

- **Multi-family permits are more easily assessed than total permits or employment, and are therefore a better indicator of future rental supply than total permits and employment are of total supply or demand conditions.** Multi-family permit issuance trends mirror total permit trends in their downward direction; however they exhibit much lower volatility than Detroit's employment growth or total permits.

- **The Detroit metro area is a much more risky market for housing development than the Kansas City metro market.** When overlaying supply and demand conditions, the metro market has been building well above the historical ratio of permits/ employment growth for the past 30 years. The economic volatility of both employment and permit indicators suggests highly uncertain demand and supply conditions. The economy's dependence on a declining and volatile industry sector presents concern. Its future growth is dependent on its ability to capture increasing shares of stable and growing sectors.

- **Despite their relative stability, multi-family building relative to employment growth have been increasing over time.** Annual trends reveal that the rise in the proportion of multi-family permits were even greater between 1984 and 1986 than their already high than historical average. The percentage growth in real rents tracked over the same period reflects that their growth began to fall accordingly in 1984.

8.2 "Feasibility Framework" Applied to Sub-Market Research

8.2.1 Platte County, Missouri

- **Platte County's growth in its job base is more recent than the metro area's**, where the sub market added 54 percent of their total 1989, employment base between 1980 and 1989 as compared to the metro area having added 19 percent to their base over the same time period.

- **The character of the employment base and sector growth represents a stable source of demand in industries that produce renter demand.** The sub markets primary industry sectors are retail trade, government, T.C.P.U. and services-- same as metro area with the exception of T.C.P.U. Metro findings suggest all but retail trade are stable and growing sources of demand.

- **The sub market's employment composition appears more stable than the metro area's.** T.C.P.U. is growing and tests as much more stable than manufacturing (the metro area's fourth predominate sector), which is both a declining and highly volatile industry sector.

- **The character of T.C.P.U. in the county is labor intensive and transportation related, (which creates rental demand) rather than capital intensive and telecommunication oriented (which created owner demand).** The character of employment tends toward large floor-plate, business-park users that largely support spin-off demand from the international airport. Typical jobs include: data processors, customer service representatives, reservation specialists, airplane mechanics, sky caps, etc.

- **The county's residential stock is older/developed earlier than the metro areas.** Platte County added only 12 percent of their total 1989 housing base between 1980 and 1989. This compares to 21 percent added metro wide.

- **Housing growth did not develop on pace with job growth through the 1980s.** The additions to housing that were added in the 1980s were approximately one-fifth of the additions to employment over the same time period.

- **The share of the county's multi-family development in the 1980s was higher than the metro average.** Multi-family permitting averaged 41 percent of total permits issued metro wide. Over the same time period, Platte issued approximately half of total permits in multi-family product.

- **Capture analysis suggests that job growth is occurring in the direction of Platte County. The county did not capturing a proportional share of housing.** Platte County captured five and a half times its fair-share of the metro area's employment growth, one-third its fair share of total housing growth, and one and a quarter times its fair share of multi-family housing growth between 1980 and 1989.

- **Overlaying demand and supply conditions strongly indicate under supply in both total and multi-family housing.** The ratio of permits to employment growth of 0.14 between 1980 and 1989 averaged well below the historical average of 0.90. Similarly, the ratio of multi-family permits to employment growth of 0.07 between 1980 and 1989 averaged well below the historical average of 0.27. Overall, the level of under supply, coupled with strong and stable demand conditions suggest a high opportunity, low risk market for investment in rental product.

8.2.2 Johnson County, Kansas

- **Growth in Johnson County's job base occurred later than the metro area's.** The sub market added 41 percent of their total 1989 employment base between 1980 and 1989. This compares the metro area's 19 percent of additions to the base over the same time period.

- **The character of the employment base and sector growth represent a stable source of demand.** Like Platte County, the sub market's primary industry sectors are retail trade, government, T.C.P.U. and services. Metro findings suggest all but retail trade are stable and growing sources of demand.

- **The sub market's employment composition appears more stable than the metro area's.** T.C.P.U. is both growing and tests as much more stable than manufacturing (the metro area's fourth predominate sector), which is both a declining and highly volatile industry sector.

- **The character of T.C.P.U. in the county is telecommunication oriented and more capital intensive than Platte County, which creates owner demand rather than renter demand. Service employment is also associated with producing owner rather than renter demand.** In contrast to Platte County's T.C.P.U. sector, the character of employment in Johnson County tends toward Class-A, campus-style office users, that support telecommunication operations. Typical jobs are in professional white collar executive, engineering, and sales positions, with a wage structure similar to the service sector. Both segments produce owner demand. Income-cohort analysis, which reveals what percentage of households are over qualified to rent, will be particularly important in this sub market.

- **The county's housing stock is generally newer than much of the metro area's.** Johnson County added approximately 34 percent to their total 1989 housing base between 1980 and 1989. This compares to the metro area's 21 percent.

- **The share of the county's multi-family development in the 1980s was higher than the metro average.** Multi-family permitting averaged 41 percent of total permits issued metro wide. Over the same time period, Johnson County issued approximately 54 percent of total permits in multi-family product.

- **When demand and supply trends are reviewed as spatial shifts toward or away from Johnson County, statistics point to housing and job growth directed toward the county.** Between 1980 and 1989 the area was capturing over three times its fair-share of employment growth, roughly one and a half times its fair share of total housing growth, and over four times its fair-share of multi-family product.

- **Overlaying demand and supply conditions indicate under supply in total housing and recent over supply in rental housing.** The ratio of permits to employment growth of 0.41 between 1980 and 1989 averaged well below the historical average of 0.65. The ratio of multi-family permits to employment growth of 0.22 between 1980 and 1989 averaged slightly higher than the historical average of 017. The level of slight over supply in the multi-family market will create softness in the market in the near term; however, the strong and stable demand conditions in the county support feasibility of investment in multi-family product. Due to the amount of existing competition in the market, location will be the key to any new project's success. In addition, the percentage of households that will qualify for income restricted rental housing may be a factor in positioning analysis.

8.2.3 Oakland County, Michigan

- **Growth in Oakland County's job base occurred later than the metro area's.** The sub market added 25 percent of their total 1989 employment base between 1980 and 1989. This compares the metro area's addition of 10 percent to the base over the same time period.

- **Oakland County has effectively transition away from manufacturing into service and F.I.R.E. sectors; as a result, the sub market's employment composition is more stable than the metro area's.** Oakland County's 14 percent share of manufacturing is much lower than the metro areas (21 percent). Manufacturing tested as extremely volatile on a metro wide basis. 35 percent of the county's employment is represented in the service sector, one and half times larger than the three other sub markets and seven percent larger than Detroit metro. F.I.R.E. comprises nine percent of total employment, twice the share of the three other sub markets and three percent larger than Detroit metro's share. Both services and F.I.R.E. exhibited extremely low volatility metro wide.

- **Even the county's share of manufacturing seems to have undergone a structural shift away from traditional industrial and warehouse (i.e., line worker employment).** Oakland County's "Big-3" auto users have closed down production plants in the county, but have continued to build large capital intensive engineering and R&D tech centers with high percentages of office build out.

- **Service and F.I.R.E. sectors as well as the high tech component of manufacturing provide wage rates that create owner rather than renter demand.** Despite their associated stability, service and F.I.R.E. sectors create wage rates that produce owner rather than renter demand. In addition, the salary ranges of employees at the Chrysler

Tech Center exceeds $50,000. As in the case of Johnson County, income-cohort analysis, which reveals what percentage of households are over qualified to rent, will be particularly important in this sub market.

- **The county's housing stock is generally newer than much of the metro area's.** Oakland County added approximately 34 percent to their total 1989 housing base between 1980 and 1989. This compares to the metro area's eight percent.

- **The share of the county's multi-family development in the 1980s was slightly higher than the metro average.** Multi-family permitting averaged 43 percent of total permits issued metro wide. Over the same time period, Oakland County issued approximately 45 percent of total permits in multi-family product.

- **When demand and supply trends are reviewed as spatial shifts toward or away from Oakland County, statistics point to growth in jobs and housing directed toward the sub market.** Between 1980 and 1989 the area was capturing over two and a half times its fair-share of employment growth, roughly twice its fair share of total housing and multi-family housing growth.

- **Overlaying demand and supply conditions indicate under supply in total housing and equilibrium conditions in rental housing.** The ratio of permits to employment growth of 0.43 between 1980 and 1989 averaged well below the historical average of 0.78. The ratio of multi-family permits to employment growth of 0.19 between 1980 and 1989 is on par with the historical average of 0.20. In the case of multi-family building, Oakland County's decline permitting relative to employment growth in the latter half of the 1980s brought the ratio in line with historic averages. Had the county continued to build at the pace in which it began the 1980s, by 1990, the county would have been well over supplied with rental

product. These conditions, coupled with strong and stable demand conditions support feasibility of investment in multi-family product. The percentage of households that will qualify for income restricted rental housing, however, could be an issue effecting feasibility.

8.2.4 Macomb County, Michigan

- **Growth in Macomb County's job base occurred later than the metro area's.** The sub market added 21 percent of their total 1989 employment base between 1980 and 1989. This compares the metro area's addition of ten percent to the base over the same time period.

- **Macomb County has not been able to capture the growth in service industries to off set the loss in manufacturing jobs; the sub market's employment composition is less stable and diverse than either Oakland County or the metro area.** At roughly one-third of total employment, Macomb County's reliance on manufacturing employment is one and a half times that of the metro area and twice that of Oakland County. The sector's extreme volatility on a metro wide basis creates for great uncertainty in demand conditions.

- **Unlike Oakland County, the county's share of manufacturing base continues to be in traditional industrial and warehouse components, which have been experiencing declines since the later 1970s.** Macomb County's manufacturing base is rooted in industrial production plants and auto suppliers (like glass and plastic fabricators).

- **The county's housing stock is generally newer than much of the metro area's.** Macomb County added approximately 14 percent to their total 1989 housing base between 1980 and 1989. This compares to the metro area's eight percent.

- **The share of the county's multi-family development in the 1980s was slightly higher than the metro average.** Multi-family permitting averaged 43 percent of total permits issued metro wide. Over the same time period, Macomb County issued approximately 52 percent of total permits in multi-family product.

- **When demand and supply trends are reviewed as spatial shifts toward or away from Macomb County, statistics point to growth in jobs and housing directed toward the sub market.** Between 1980 and 1989, the area was capturing over two and a half times its fair-share of employment growth, roughly one and a half times its fair share of total housing, and over two and a half times its fair share of multi-family housing growth.

- **Overlaying demand and supply conditions indicate under supply in total housing and over supplied conditions in rental housing.** The ratio of permits to employment growth of 0.45 between 1980 and 1989 averaged well below the historical average of 0.77. The ratio of multi-family permits to employment growth of 0.24 between 1980 and 1989 is higher than the historical average of 0.16. The high multi-family building ratio is attributable to the county's sharp rise in multi-family permitting (double that of historical averages) in the latter half of the 1980s. These over supply conditions, coupled with highly uncertain demand conditions does not support the feasibility of investment in multi-family product.

8.3 Positioning Framework Applied to Public Data

- **All four sub markets are adequately young, so as to consistent provide a source of rental demand**. Median ages range slightly, between 29.2 to 30.3. In addition, a steady percentage of total population across sub markets falls within prime renter bands (between 18 and 34).

- **Three of the four sub markets are more affluent than their respective metro areas. Macomb County's median income is slightly lower than Detroit metros.** Kansas City metro median income in 1989 was $37,000, as compared to $38,174 and $42,741 in Platte and Johnson Counties, respectively. Detroit metro's median income in 1989 was $39,900, as compared to $43,406 and $38,932 in Oakland and Macomb County, respectively.

- **When county estimates for 1989 incomes are compared to HUD's metro maximum allowable incomes, prior concerns in the feasibility portion about Johnson and Oakland Counties'[15] predominance of higher-wage sectors is substantiated by their relative percentage relatively lower percentage estimates of income-qualified households.** Both counties affluence relative to the metro area could indicate an insufficient supply of income-qualified renters in the sub market. Income-qualified households average 23 and 26 percent, respectively, in Johnson and Oakland County, as compared to 29 percent in Platte County and 34 percent in Macomb County. Further analysis of local (neighborhood) demographics is necessary to assess the validity of the concern.

- **Both markets can be characterized by affordable for-sale product; affordable housing a is "catch-22" for rental housing.** While afforbaility is a necessary component attracting a young and skilled labor pool which is a prerequisite for economic growth, for-sale affordability leads to a small share of total household growth making rental decisions. Only between 20 and 30 percent of all households rent across the four sub markets.

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[15] Despite the 1990 tax credit issuance for Woodlake Hills, the estimate of percentage qualified households living in Oakland County is derived from 1989 metro and sub market income estimates because 1990 county income estimates were not available at the time of of Woodliake Hills due diligence. It is assumed the relationship between the sub market and county estimates did not change substationally between 1989 and 1990.

- **The two Kansas City sub markets' have a much stronger family component residing in rental units than the two Detroit sub markets.** In Platte and Johnson Counties, three-bedroom units comprise 19 and 21 percent of total rental stock, where as in Oakland and Macomb Counties three-bedroom units comprise 13 and 15 percent, respectively. All sub markets capture a similar share of two-bedroom units. Lastly, with one-bedroom units comprising 38 percent of total rental stock, Oakland and Macomb Counties have a larger share of one-bedroom units relative to Platte and Johnson Counties, where one-bedroom units only comprise 23 and 27 percent of total rental units, respectively.

- **In all four cases the existing and proposed building programs offer fewer three-bedroom units than comprised in the sub market's base of rental stock.** Willow Lake has a significantly greater amount of one-bedroom units than the sub market as a whole, and offers no three bedroom units. Leawood Manor has a program largely in line with the sub market's rental base. Woodlake Hills and Oakview Square are planned to have a disproportionate number of two-bedroom units than the market, too few one-bedroom units, and no three bedrooms.

- **Without qualitative information from local comparables, it is impossible to asses whether the programs divergence from the market can be assessed as a strength or a weakness.** Information on individual project's mixes, occupancies and concessions by bedroom, and most popular units is necessary input determine whether the programs are tapping/will tap unmet demand or whether they fail to represent the markets' current demand conditions.

8.4 Positioning Framework Applied to Qualitative Field Research

8.4.1 Willow Lake (Platte County)

- **Willow Lake's local employment market experienced significant change since late 1989 that employment statistics and volatility measures did not fore shadow; however, the local rental market's heavy dependence on airport-related employment should have yielded discussion and speculation about its anticipated permanence.** While none of the relocations had been announced, both Branniff and TWA were experiencing financial difficulties. In addition, the overall declining profit margins resulting from deregulation should have signaled specific research on the two companies' long-term viability in Kansas City.

- **The presence of construction employment temporarily boosted occupancies at the time the original research was conducted.** Temporary construction employment's share of the tenant base in local projects was evident at the time of the original research. While it do not comprise a significant share of total rental units, performance figures did include a source of demand that was known to be temporary from the outset. Its presence should have been detected in the original research.

- **In theory, the project's location along the interstate between northern and southern employed rental segments provided the opportunity for the project in theory to attract both segments.** Despite the project's price positioning between older and newer product, Willow Lake's modest appearance and its lower overall project amenity (lacking the club house and expanded recreation facilities of the newer projects) and unit feature level (lacking the washer/dryer hook-ups and extra storage in the units) relative to newer

product, determined that its would more effectively compete with older product built. Its tenant base was therefore largely working locally and north toward the airport.

- **Despite the subject property's recent construction, it's curb appeal was over estimated in its ability to draw market segments that were attracted to newer product.** The subject property's, architecture, color scheme, signage and design gives it the appearance of an older project.

- **Willow Lake's building program can be criticized for the lack of three bedrooms.** Tenure analysis by bedroom type reflected a significant share of three-bedrooms renting in the county. Local competition provided in much lower share than county averages. Qualitative interviews support the need for additional three bedrooms.

- **The subject property's unit sizes are significantly smaller than all product renting in the market area.** While value (rent per square foot) is positioned in between older and newer product, unit sizes define the low end of the market. Even the new high-end, lifestyle product (which typically offers the smaller units in a market place) are notable larger than the subject property's units.

- **As built, Willow Lake is operating at an overall disadvantage to both older and newer competition renting in the market place.** Unit feature and project amenities are inferior to new product in the market, and in line with older product; yet the project is built much smaller than older projects without a price advantage.

8.4.2 Leawood Manor (Johnson County)

- **The project's location within Leawood is a detriment to the project's performance.** While prior research relies on the prestige of the subject property's location to substantiate feasibility, the site's rural location, inaccessibility to major collectors, and particularly high demographics are poor indicators to LIHTC rental development.

- **Typical income levels at competitive projects substantiate the concern of an inadequate qualified renter pool in the local area.** Local demographics are even higher than sub market demographics, which presented concern in Chapter Six.

- **Highly controlled growth in the Leawood area does not suggest that the project's location relative to employment and services will improve.** Only one other site is zoned multi-family in the area and that commercial development is limited. In addition, there is a good deal of available land north of Leawood on the south side of Overland Park, which would develop before growth extending down to Leawood.

- **The subject property's curb appeal and comparable amenity and feature packages make it a good deal within the market place; however the pricing structure must be discounted for the project's location.** The property is superior to older product in terms of attractiveness and amenity package and comparable in terms of unit sizes. The pricing structure above the majority of older product appears justified. It is comparable to older product in terms of attractiveness, slightly inferior in terms of amenity package, and generally larger in terms of unit size than the majority of newer product. The project's location necessitates a discount relative to newer product; therefore the pricing structure below the majority of newer product appears justified.

- **The proposed building program should would be preferable with additional three-bedroom units.** Tenure analysis by bedroom type reflected a significant share of three-bedrooms renting in the county. Local competition provided in much lower share than county averages. Qualitative interviews support the need for additional three bedrooms.

- **As built, Leawood Manor is severely disadvantaged by its location and a largely unqualified pool of local demand.** While the project's curb appeal, amenity and feature offerings, and otherwise good positioning are assets, the project will fight a continued uphill battle to identify local renter demand.

8.4.3 Woodlake Hills (Oakland County)

- **The project's location on the edge of Pontiac and Auburn Hills provides access to two distinct renter pools.** The Pontiac area provided blue collar, hourly wage type demand and the Auburn Hills are creates white-collar salaried renter demand. The property's ability to capture the latter pool will be largely determined by the building program and the quality of life associated with Pontiac.

- **Typical income levels at competitive projects dispel the notion of an adequately qualified renter pool.** In this sense, the property benefits from its location within the border of the City of Pontiac, where local demographics are much lower than the sub market average.

- **The poor reputation of the Pontiac school system, coupled with mandatory busing, creates for particularly low shares of school aged children in the competitive projects.** This extends into Auburn Hills, which shares the Pontiac school system. Outside of the district, the share of school aged children in projects triples.

- **The project would seem to have too few three-bedroom units were it not for the stigma of the Pontiac school system.** Three bedroom units are very popular and under supplied in surrounding neighborhoods outside of the Pontiac school district. Within its boundaries, however, their demand is not substantial.

- **The subject property's curb appeal and comparable amenity and feature packages position it well against competitive product; however, unit sizes average much smaller than the competition.** The property is superior to older product in terms of attractiveness and amenity package. The pricing structure within the majority of older product is justified given its small units. The project is inferior to the new Auburn Hills projects in terms of scale, prestige, and amenity package, which substantiates is discount relative to newer product. The pricing structure below the majority of newer product appears justified.

- **As built, Woodlake Hills is well positioned within appropriate demographics to capture local rental demand.** The subject property is located in a sub market with stable demand and growing conditions, yet within a neighborhood that is less affluent than the over all sub market, which creates for a qualified pool of local renter demand. The product is both appropriate and well positioned within the competitive market.

8.4.4 Oakview Square (Macomb County)

- **The project's location in New Baltimore is some distance from an employment base. The area in between has a significant amount of rental supply.** While the demographics are appropriate, Oakview Square is suffering from a being located on the fringe of a continually contracting market.

- **The project is clearly superior to its competition in terms of curb appeal and amenity offerings. Units averages slightly smaller than the competition. All product is older** While historical data on the project and its competition is scarce, Oakview Square's pricing structure is justified within the market place.

- **Woodlake Hills is well positioned within appropriate demographics to capture local rental demand; however demand is highly uncertain, the project's location is remote to employment, and closer-in supply is sizable.** Despite the project's sound positioning amongst its competition, the subject property is located in a sub market with volatile demand conditions and over supply. Since the county does not appear to be transitioning into more stable, higher growth sectors, the project is anticipated to fight an increasing uphill battle to capture increasing shares of a decreasing pie.

8.5 Recommendations/ "Lessons Learned" for Future Multi-Family Investment

8.5.1 Feasibility

- Implement the use of "at place" employment data as proxy for demand. Its frequency of publication and its easy availability, and consistency across geographical location, coupled with its close association to rental demand, renders employment trends a more sensitive indicator of demand conditions than population trends, which are already three years outdated from Census publication.

- Implement permit issuances as a proxy for supply. Like employment, their frequency of publication, easy availability through a central source, consistency across geographical location, and direct relationship to built supply makes them a reliable indicator of supply conditions.

- Rely on long term trends to assess the cyclically and volatility supply and demand indicators. Their distinct behavior across markets provides and relative to one another provides clear insight into their character and future certainty.

- Conduct capture analysis to identify spatial shares and shifts of demand and supply toward or away from a sub market.

- Focus on metro markets where the share of job growth over time as a percentage of the total employment base has been at least stable, but preferably growing.

- Relate industry sector information to understand the varying composition of markets, and sectors associated growth rates, risk levels, and likelihood of creating renter demand; however, be aware of segments within major industry categories that may exhibit dissimilar behaviors, i.e., Platte County's transportation employment versus Johnson County communication employment, which were both classified under T.C.P.U.

- Donne equal weight to demand and supply data. Only their overlay can indicate imbalances/building opportunities.

- Place an emphasis on market areas exhibiting strong demand conditions over controlled/limited supply conditions, because over supply in a market can be hedged against through good location and positioning strategy, whereas weak demand conditions cannot. Conceptually, risk levels can be assessed based on the following framework (see matrix):

  1 Low Risk: growing and stable demand in sectors that create renter demand, accompanied by historic under supply and/or anticipated future supply constraints (Platte County);

  2 Moderate Low Risk: growing and stable demand in sectors that create renter demand, accompanied by historically volatile building trends and uncontrolled building constraints (Johnson and Oakland Counties)

  3 Moderate High Risk: declining and volatile (uncertain) demand in sectors creating owner demand, accompanied by stable and controlled supply conditions; and

  4 High Risk: declining and volatile (uncertain) demand in sectors creating owner demand, accompanied by historically volatile building trends and no future building constraints (Macomb County).

- Seek sub markets whose housing growth did not keep pace with its job growth.

- Note sub markets with sector employment that is growing and stable, but whose wage rates are more likely to create owner than renter demand; their income cohort statistics will be particularly important to assess the depth in demand of income qualified renters for LIHTC projects.

8.5.1 Positioning

- Since rent maximums are more restricted under pre-1990 regulation in household sizes averaging fewer than 1.5 occupants per bedroom, the acquisition of existing projects (with pre-1990 credits) should be avoided in "commuter" submarkets with few children.

- Conversely, the acquisition of existing projects (with pre-1990 credits) are attractive in "family" sub markets, where household sizes average in excess of 1.5 occupants per bedroom, since rent maximums are higher than in new projects.

- Evaluate the developer's set-aside election decision to assess whether the election was in the projects favor given local demographics.

- Seek young sub market demographics.

- Compare sub market income cohort trends to HUD's metro median incomes. Sub markets exhibiting greater affluence are likely to have a low share of income qualified household living in the area. However, less affluent "pockets" in sub markets that exhibit higher than average demographics (than the metro area) and are represented by stable employment sectors, present strong locational opportunities for LIHTC projects (as seen at Woodlake Hills). Similarly, even more affluent "pockets" in sub markets already exhibiting higher than average demographics than the metro area, i.e., Leawood, should be avoided, unless access to transportation routes leading to other areas are superior.

- A metro-wide affordable housing market should not be viewed as a clear asset or detriment to rental product.

- Compare proposed or existing building programs to rental tenure statistics by bedroom to detect strong departures from existing stock. Use qualitative market findings in competitive projects to assess whether the departure is a program weakness or a building opportunity.

- Despite seemingly benign employment statistics and trends, thoroughly research of employment sectors representing a significant share of renters in the area is necessary to assess the stability of the pool. Such typical groups would include military installations, construction workers, factory workers, farmers, etc.

- Distinguish between what a target market "would like" and what they are "willing to pay for." Hone specifications accordingly. Often over built product-- "bells and whistles"-- go unused and simply serve to carve into gross revenues.

- Test for typical income levels at market rate projects within the immediate vicinity of the subject prepay since they reflect of the character of the rental market's structural demand and can fore shadow difficulties attracting income qualified demand to the subject site. In this sense, LIHTC product being introduced much lower does not necessarily provide the project a market advantage, as the qualified rental pool must derive from outside the local area. The appropriateness of surrounding employment for LIHTC projects will determine the projects ability to attract tenants from outside of the market area.

- Recognize that the quality of the local school district determine the strength of the two-bedroom/den and three-bedroom apartment market.