

**A New Financial Architecture for
Developing Mixed-Income Housing in Massachusetts**

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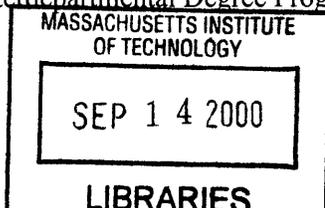
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ABSTRACT

The need for affordable housing is as critical now as it has ever been. Mixed-income housing has been adopted by federal policymakers and many state housing agencies as a means to address this pressing issue. Two mixed-income programs with contrasting results are examined and the strengths and weaknesses of each discussed. Based upon the lessons learned, the authors use a variety of financing mechanisms to create a new financial architecture for the development of mixed-income housing in Massachusetts.

The thesis begins with a general overview of the history of U.S. housing policy and the current need for affordable housing. It follows with a detailed description of the various mechanisms used to finance and promote the supply of low-income housing. Two mixed-income housing programs, the SHARP Program and the 80/20 Program, are examined. Using a variety of financing mechanisms, a new financial architecture is advanced based upon a new public/private partnership. Current construction and operating costs from the greater Boston area are used to simulate the development and operation costs of an 80/20 project. Growth rates extracted from a portfolio of 23 mixed-income properties financed by the Massachusetts Housing Finance Agency (MHFA) under the SHARP Program are superimposed on a baseline scenario to subject it to the same financial stresses that the SHARP properties experienced during the recession of the early 1990s. The risks and potential returns to the public/private partnership are analyzed and recommendations made so the returns to each party are commensurate with the risks that party bears when investing in mixed-income projects. The Model is run through a variety of sensitivity analyses to measure the impact of changes in key variables on the resulting returns of principle partners. The conclusion drawn is that the long-term viability of mixed-income projects can be tenuous, but with the proper alignment of interests and through the use of carefully interwoven finance mechanisms and public policies, mixed-income projects can help address the affordable housing crisis while successfully meeting the goals of each party to the partnership.

Thesis Supervisor: W. Tod McGrath

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A main focus of our thesis revolves around how partnerships should, and can, work for the mutual benefit of all involved parties. Our thesis is proof to the words we put on paper, as our collaboration has been a truly rewarding experience, both intellectually and spiritually, for both of us. The other partners to our thesis – our families, friends, and the real estate professionals who cheerfully opened their doors to us, have been instrumental in helping us complete our paper. Through their encouragement and warm support, we feel our document is proof that the sum of the parts can be greater than the individual pieces.

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Introduction

Over the past decade, mixed-income housing has steadily gained attention as a viable approach to make inroads against the overwhelming need for affordable housing. The social and economic ramifications of this concept are highly touted. There exist many examples of mixed-income projects in which households of various income levels live side-by-side in harmonious communities. To the casual observer, the affordable units are virtually indistinguishable from the market-rate units. This is a far cry from many of the affordable units built in the past. For many people, the words “affordable housing” still conjure up the image of featureless boxes in concentrated clusters. Only twenty years ago this approach to housing “the needy” was thought by policymakers as the most viable solution to the lack of affordable housing the United States. The government had already attempted to construct housing on its own which ended with dismal results. Public/private partnerships were later formed to tap into the efficiency of the private market, but the frameworks for these partnerships were riddled with problems. However, we should not look upon these past attempts as complete failures, as valuable lessons have been learned that are shaping current policy which is clearly endorsing the concept of mixed-income. The framework and policy governing mixed-income projects continues to be re-worked as the various players to the private/public partnership search for the optimal solution. The focus of this thesis is to use the framework of the established 80/20 Program, and through the mixing of various financing and cost reduction mechanisms, create a new financial architecture for developing mixed-income housing in Massachusetts. The framework created calls for a new public/private partnership in which returns are commensurate with the risks taken, and the expectations of each party clearly defined and outlined in what could be phrased “a private market approach to a public need”.

Chapter 1

Background

1.1 Brief Summary of Federal Legislation on Affordable Housing

The lack of safe, decent and affordable housing is not a recent phenomenon; it has plagued our society and challenged both federal policymakers and the real estate development community for years. Congress took a bold first step to address the problem with the passage of the Housing Act of 1937. This landmark legislation created the first Federal framework for government-owned affordable housing. Federal subsidies were directed to Public Housing Authorities that in turn used the money to construct, own, and manage the public housing. However, little housing was actually created as the program was mired in political controversy and funding was soon cut off.

After a decade of heated debate, Congress authorized the Housing Act of 1949 which was written into law with the noble goal of “a decent home and suitable living environment for every American family.” Federal loans and grants were established to build 810,000 new low-rent housing units over the next six years. Restrictions were placed on construction costs and tenant incomes and rents were set at least 20 percent below the lowest rents for comparable private units in the same community. But even with the support of the Act, the production of public housing continued to be held up by political opposition and was further obstructed by the real estate and building industries which lobbied strongly against it. Annual production was curtailed to the point that it would eventually take almost 20 years to meet the goal of 810,000 units which the Act of 1949 had set to accomplish in only six.¹

The Housing Act of 1959 contained Section 202 that marked a turning point in federal policy as direct government loans were made to the private sector to develop and maintain subsidized housing units. These loans, however, were restricted to private non-profit sponsors of housing for the elderly or disabled. Section 202 accounted for over 45,000 units before being modified in 1970.²

During the 1960s, support for public housing strengthened with a shift towards liberalism and the gradual acceptance of the program by the real estate and building industries. President Johnson placed urban issues at the forefront of his administration and established the Department of Housing and Urban

¹ Alexander von Hoffman, Seminar in Affordable Housing, Harvard University, July 18, 2000.

² Diane R. Suchman, *Public/Private Housing Partnerships*, (Washington, D.C.: Urban Land Institute) 1990, p. 6.

Development (HUD) giving it a cabinet position. A few years later, Johnson pushed through the Housing and Urban Development Act of 1968. This Act marked the beginning of large-scale federal programs aimed to support the construction of low and moderate-income housing. Included in the Act was a shift away from public housing towards programs that were dependent on the private sector. Section 236 of the Act reduced interest rates paid by developers who agreed to construct low-income housing to one percent and backed the loans by private lenders with the security of FHA mortgage insurance. The Housing Act of 1968 was ultimately responsible for the production of 21.5 million housing units between 1968 and 1984 of which 18.8 million were built by the private sector.³ The new partnership with the private sector eventually faltered due to high costs leading it to become entangled in controversy.

A number of well documented public housing failures and the high expense of the programs led President Nixon to place a moratorium on all federal housing programs in 1973. A year later the Housing and Community Development Act of 1974 was enacted. This Act created the Section 8 Program and the Community Development Block Grant (CDBG) Program, both of which provided a more flexible source of funding. Section 8 also steered affordable housing policies in a new direction. Unlike the public housing program in which the government developed and managed the housing projects, Section 8 created rent subsidies for projects developed, owned and maintained by the private sector. The subsidies offered were either project-based or tenant-based assistance. Subsidies were delivered through a number of different mechanisms to subsidize the rent in exchange for the owner committing to maintain the units as affordable for a specified period of time. The Section 8 program quickly replaced public housing as the most important source for new Federal subsidies for rental housing. By 1980, housing units produced through the Section 8 Program equaled those created over the 40-year period by the Housing Act of 1939 – approximately 1.2 million units.⁴

During the 1980s, housing policy changed dramatically as funding for a wide range of federal programs was cut. HUD's FY 1981 budget of \$31.9 billion had been slashed to \$15.4 billion by FY 1988. In 1983, the Section 8 new Construction and Substantial Rehabilitation programs were terminated and replaced by a housing voucher system. Vouchers were created as policymakers changed from a housing policy that previously emphasized subsidy for production to direct subsidies for tenants. Although the voucher system is much less expensive to fund, it has come under criticism from affordable housing advocates for not directly producing low cost housing units.

³Ibid., p.6.

⁴ U.S. Department on Housing and Urban Development, *Opting In: Renewing America's Commitment to Affordable Housing*, <<http://hud.gov/worscase.html>> (Washington D.C., April, 1999).

In response to the deep cuts in federal funding for housing production programs, the government developed a number of financing and funding mechanisms to encourage the private sector to develop low-income housing. The 1981 Economic Recovery Tax Act (ERTA) allowed preferential treatment of capital gains and 15-year accelerated depreciation. The 1986 Tax Reform Act eliminated the preferential treatment of capital gains and lengthened the depreciation schedule to 27.5 years for rental properties. “These swings in tax policy have motivated housing production and overproduction and then caused a near collapse of multi-family production before the recovery of multi-family production in the 1990s.”⁵

The 1986 Tax Act also introduced the Low-Income Housing Tax Credit (LIHTC). LIHTCs allow investors a dollar-for-dollar reduction of their federal taxes received when they invest in low-income housing projects. This has greatly increased the equity available for affordable housing projects and the LIHTC program has been estimated to be responsible for up to 94 percent of the affordable rental production in the U.S.⁶ Critics charge that the tax credit alone is not sufficient to reach the poorest of the poor. “Section 8 or other operating expense assistance is needed to make the projects work for tenants having incomes of 50 or 60 percent of median, never mind reaching lower in the income distribution.”⁷

In the last decade, The 1990 National Affordable Housing Act was placed into law and created the HOME Investment Partnership Program which provides federal funding for state and local housing programs. The Quality Housing and Work Responsibility Act of 1998 (QHWRA) was signed into law in October, 1998. The objectives of the Act are to substantially reform public housing by:

- reducing the concentration of poverty in public housing and allowing income targeting;
- raising the performance standards of Public Housing Agencies and rewarding high performance;
- authorizing the HOPE VI revitalization program;
- transforming the public housing stock through new policies and procedures for demolition and replacement; and
- merging the Section 8 voucher and certificate programs.

⁵ James Wallace, *Housing in the 21st Century*, (Washington, D.C.: Symposium Sponsored by the Urban Land Institute and the Center for Public Housing, March 29-30, 1999) p. 29.

⁶ Robert Sheehan, “Working Together: Public-Private Partnerships for Affordable Housing”, (Units, April 1998) p. 33.

⁷ Wallace, *op. cit.*, p. 30.

Table 1.1.1

Major Federal Policies Affecting Affordable Housing

Policy	Main Features	Accomplishments
Housing Act of 1939	First federal framework for government-owned affordable housing	Little housing was produced due to political controversy leading to elimination of funding
Housing Act of 1949	Federal loans & grants were established to build 810,000 low-rent units over the next 6 years	Actual production levels were quite low due to political opposition
Housing Act of 1959	Turning point in federal policy as direct government loans were main to the private sector – units restricted to elderly or disabled	Limited amount of units were produced
Housing & Urban Development Act of 1968	Clear shift away from public housing, sought to partner with private sector	Responsible for creation of over 20M units before faltering due to high costs
Housing & Community Development Act of 1974	Created Section 8 & CDBG Programs	Section 8 quickly replaced public housing as most important federal program
Community Reinvestment Act of 1977	Requires banks to investment in low-income communities	Increased supply of capital for development
Tax Act of 1981	Very generous tax benefits for investors in rental real estate	Created boom but projects built for tax reasons largely ignoring the underlying real estate market leading to much financial distress
Tax Act of 1986	Reduced 1981 tax benefits and created LIHTC	LIHTC has become main mechanism fueling the production of affordable housing today
Quality Housing and Work Responsibility Act of 1998	Prohibits concentration of poverty in public housing and allows income targeting; reformed Public Housing Agencies; authorized HOPE VI revitalization program	Responsible for a major reforming of Public Housing

Federal policies that encourage private development of affordable housing have also been aimed at the lending industry. The Community Reinvestment Act of 1977 placed requirements on banks and thrifts to increase investment in low-income communities. Later, additional legislation to promote development of affordable housing included the 1989 Financial Institutions Reform, Recovery and Enforcement Act (FIRREA); the 1992 Federal Housing Enterprises Financial Safety and Soundness Act; and the 1992

Housing and Community Development Act. These Acts placed requirements on lending institutions, Fannie Mae, and Freddie Mac HUD, respectively, in order to generate more loans for affordable housing.

1.2 Need for Affordable Housing⁸

The desperate need in America for affordable rental housing is outlined in HUD's report *Rental Housing Assistance – The Worsening Crisis*. HUD's Secretary, Andrew Cuomo, presented this report to Congress with a letter⁹ which included the following comment "there is an urgent need to strengthen federal efforts to assure adequate supplies of decent, safe and affordable housing for America's lowest-income¹⁰ families". Key findings in the report include the following:

- Despite continued robust economic expansion, in 1997 worst case housing needs¹¹ reached an all-time high of 5.4 million families. This was an increase of 4 percent from 1995 – twice the rate of growth in the number of all U.S. households.
- The housing stock affordable to the lowest income Americans continues to shrink. The number of rental units affordable to families with incomes below 30 percent of area mean income (AMI) decreased by 5 percent between 1991 and 1997 – a loss of over 370,000 units.
- Although the majority of worst case needs reside in the central cities, a large and growing number live in the suburbs. In 1997, one of every three households with worst case needs was located in the suburbs.¹²

The Joint Center for Housing Studies' *State of the Nation's Housing 2000* supplements these findings with additional facts.

- There were 3.9 million very low-income households living in unsubsidized housing with salaries and wages equal to, or greater than, the equivalent of full-time employment at the federal minimum wage. But over two-thirds of these "working poor" paid 30 percent or more of their incomes for housing and one in every four paid over 50 percent. Within this group, unsubsidized renters were particularly burdened as 71 percent faced high housing cost burdens.
- Although housing problems are concentrated in urban areas (with half of the urban renters not receiving subsidies paying over 50 percent of their income on housing), the rural areas have

⁸ Affordable housing is defined as housing that serves households with income at or below 80% area median income (AMI) whose monthly housing costs do not exceed 30% of gross income.

⁹ Andrew Cuomo, *Letter to Congress*, <<http://hud.gov/worscase.html>>, March 2000.

¹⁰ HUD has categorized income levels as follows: **low-income**: household income at, or below, 80% AMI; **low to moderate-income**: household income between 50% and 80% AMI; **very low-income**: household income below 50% AMI; **extremely low-income**: household income below 30% AMI.

¹¹ Households with worst case needs are defined in this report as unassisted renters with incomes below 50% of the local median, who pay more than half of their income for rent or live in severely substandard housing.

¹² U.S. Department of Housing and Urban Development, *Rental Housing Assistance – The Worsening Crisis: A Report to Congress on Worst Case Housing Needs*, (Washington, D.C., March 2000).

significant problems too. In 1997, about one in three rural renters spent more than half their incomes for housing and were even more likely than urban families to live in severely inadequate housing.

Table 1.2.1
Housing Conditions of Very Low-Income Rental Households, U.S., 1997

	<u>Total</u>	<u>Rural</u>	<u>Urban</u>	<u>Working Poor</u>
Total Rental Households	10,253,000	1,529,000	8,724,000	2,523,000
Moderately Cost Burdened	3,003,000	398,000	2,605,000	1,292,000
Severely Cost Burdened	4,879,000	557,000	4,322,000	505,000
Living in Severely Inadequate Housing	460,000	66,000	394,000	81,000
Share (%)				
Moderately Cost Burdened	29.3%	26.0%	29.9%	51.2%
Severely Cost Burdened	47.6%	36.4%	49.5%	20.0%
Living in Severely Inadequate Housing	4.5%	4.3%	4.5%	3.2%

Notes: Due to changes in the American Housing Survey in 1997, these data are not comparable with data from previous years. Estimates exclude renter households that receive housing subsidies or for which subsidy status was not reported. Numbers may differ from official HUD estimates because of differences in subsidy definition. Very low-income households defined as having less than 50% of area median income. Moderately cost burdened defined as paying 31-50% of income for housing. Severely cost burdened defined as paying more than 50% of income for housing. Severely inadequate housing defined as having severe problems with plumbing, heating, electrical systems upkeep, or hallways. Rural defined as living in rural suburbs or rural non-metropolitan areas according to the American Housing Survey. Working poor defined as having wage and salary income equal to, or greater than, full-time federal minimum wage income (\$5.15 per hour).

Source: The State of the Nation's Housing: 2000.

The severe affordable housing crisis is accelerating – as the number of low-income households with housing needs increases, the supply of unsubsidized units affordable to these households is decreasing. Between 1993 and 1995, the number of unsubsidized units affordable to very low-income households was down 8.6 percent – a decrease of nearly 900,000 units. Over the same period, the number of units affordable to extremely low-income households (those with incomes less than 30 percent of area median) fell by an alarming 16 percent.¹³

The major federal low-income housing programs are doing little to ease the crisis:

Tenant-based Vouchers and Certificates: There are currently approximately 1.5 million tenant-based certificates and vouchers across the country. The average waiting time for a voucher rose from 26 to 28 months between 1996 and 1998. In New York and Los Angeles, the wait is 8 and 10 years, respectively.

¹³ Joint Center For Housing Studies of Harvard University, *The State of the Nation's Housing 2000* (Cambridge, 2000) p. 25.

In 1995, for the first time ever no new housing vouchers were issued. Funding began again in 1998 with 50,000 vouchers being approved by Congress. Another 60,000 were added in 1999 and the President's FY 2001 budget calls for an additional 120,000 incremental vouchers. Unfortunately, vouchers and certificates do not add to the supply of affordable units as they do not induce new construction.

Public Housing: As of 1997, there were approximately 1.3 million public housing units available for occupancy. Due to neglect, 60,577 of 86,000 seriously distressed units are scheduled to be demolished. By the end of 1999, over 27,600 units had been torn down. HUD set a replacement goal of 45 percent, but to date only 7,273 units have been built or rehabbed.¹⁴

Project-based Section 8: As of 1997, project-based Section 8 housing units totaled 1.7 million. The stock of these units is shrinking as owners with contracts that have expired are opting out of the program in search of higher returns in the open market. In 1998 alone, 17,000 units opted out and through 1999 over 90,000 units have been lost. During the next five years, contracts on two-thirds of all Section 8 units (almost 1 million units) are set to expire. Forty-four states stand to lose more than 50 percent of their affordable units subsidized through Section 8. The current policy is to renew contracts for only one year which adds a great deal of uncertainty to the how much stock will be available over the coming years.

Low-Income Housing Tax Credits: Currently the largest federal rental production program, LIHTC have supported the construction of over 1 million units affordable to people earning 60 percent or less of median income. Compliance periods for the first units constructed in the program will begin to expire in 2002 and there is fear these affordable units will be lost to the private market. The tax credit has not been adjusted for inflation since its inception in 1986 resulting in allocations falling from a high of 117,099 in 1994 to just 67,822 in 1998.¹⁵

In the report, *Housing America's Working Families*, the authors point out that the need for affordable housing is not just limited to those families who fall into the "worst case" needs definition. "There are 13.7 million families with critical housing needs – from all walks of life. Some are elderly. Others are unemployed and dependent on welfare. Some have physical or emotional handicaps that limit their full participation in the economic mainstream. Others are working families¹⁶ whose modest incomes do not

¹⁴ *Ibid.*, p. 26.

¹⁵ *Ibid.*, p. 26.

¹⁶ In this report, the author's definition of "working households" includes families who earned at least half of their income from employment and whose total income fell between \$10,700 a year (the equivalent of a full-time job at the minimum wage) and 120% of the local median income.

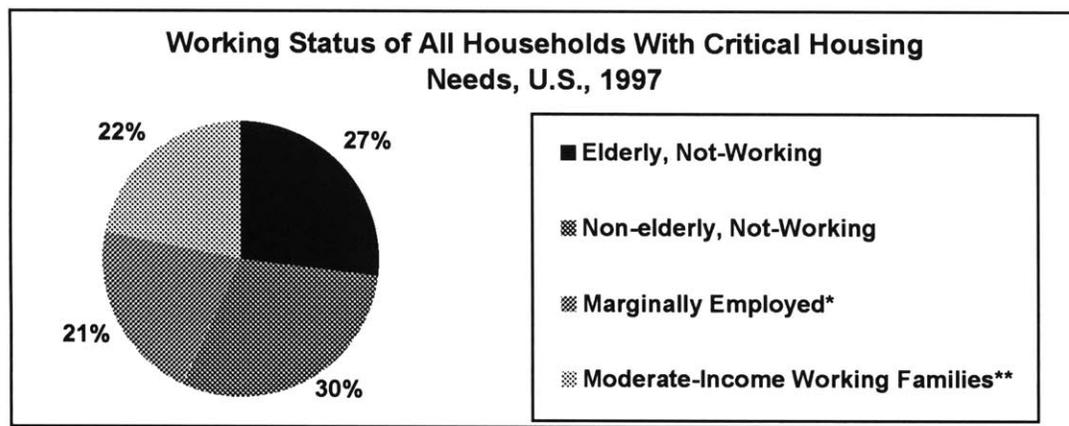
support the costs of decent housing. Still others have incomes that place them squarely in the ranks of the middle class and, in some cases, even higher.”¹⁷ Their report cites the following data which is graphically displayed in Figure 1.2.1.

One out of every seven American families (or 14%) has a critical housing need¹⁸.

Of the 13.7 million working families with critical housing needs:

- 3.7 million are elderly;
- 4 million are unemployed and/or dependent on welfare; and
- 6 million are working families, of which 3 million are only marginally attached to the labor market (their income from wages is less than the equivalent of one full-time minimum wage earner); and 3 million are working families whose incomes go all the way up to 120 percent of median income.

Figure 1.2.1



*Marginally employed include families with earnings of \$2,675-\$10,700 (e.g. between one quarter and one, full-time minimum wage equivalent).

**Moderate income are families whose total income is between \$10,700 and 120 percent of area median income, and where earnings account for at least half the family's total income.

Source: *Housing America's Working Families*

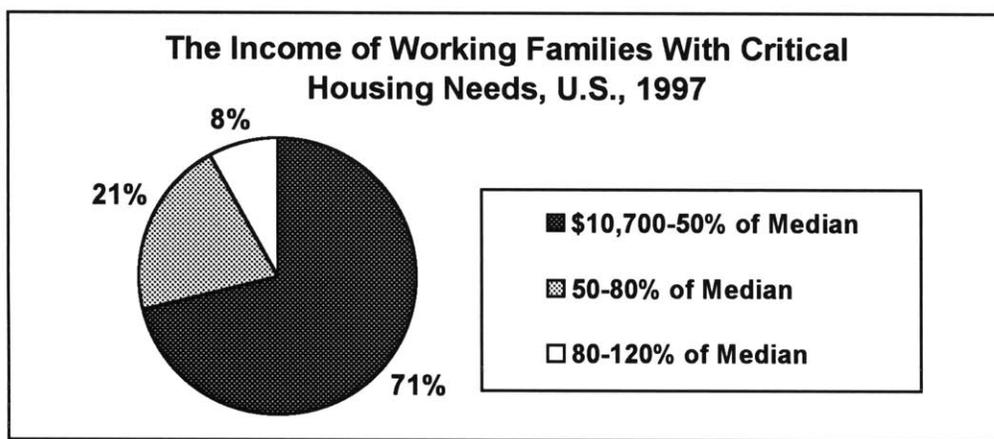
As of 1997, there were roughly 3 million moderate-income working families with critical housing needs. These families have critical housing needs despite working the equivalent of a full-time job. While nationally almost 10 percent of all moderate-income working families have critical housing needs (see figure 1.2.2), there are a number of cities that are at levels exceeding twice the national rate (San Jose, 27%; San Francisco, 26%; Boston and Tampa, 20%). Some of these cities such as Boston, San Francisco and New York have reached levels where over 20 percent of *all* households have critical housing needs.

¹⁷ Michael A. Stegman, Roberto G. Quercia and George McCarthy, *Housing America's Working Families*, (New Century Housing, Center for Housing Policy, Washington DC, Vol. 1, Issue 1, June 2000) p.1.

¹⁸ A family is defined as having critical housing needs if it spends more than 50% of its total income on housing and/or lives in a severely inadequate unit.

Between 1995 and 1997, the number of moderate-income working families with critical housing needs rose by roughly 440,000 – a 17 percent increase in only two years. The sharp rise is largely due to the rapid increase in housing prices that has occurred recently. During this same time period, average monthly rents rose at about twice the overall rate of inflation as measured by the Consumer Price Index.

Figure 1.2.2



Source: *Housing America's Working Families*

The supply of affordable units for working families continues to tighten as private developers focus new construction on the high-end market where higher profit margins can be attained. Of all the new two-bedroom unfurnished private market apartments completed in 1998, only six percent had an asking rent of under \$450 a month (the rent affordable to working families with a \$9.00 per hour full-time equivalent income). Less than 20 percent had an asking price of under \$550 (a rent affordable to families working full-time at \$11.00 per hour). In the Northeast, the market constructed less than 11,000 new rental units in 1998 and of these, less than three percent had an asking price of under \$450 while just five percent had an asking rent of between \$450 and \$549.¹⁹

Critical housing needs are not restricted to the nation's cities. In fact, the number of working families with critical housing needs is greater in the suburbs (1.3 million) than it is in the central cities (1.2 million).²⁰

¹⁹ *Ibid.*, p. 20.

²⁰ *Ibid.*, p. 13.

It is hard to imagine that the need for affordable housing in the U.S. continues to be great even during the unprecedented prosperity for our nation as a whole, but the numbers do tell the story. Millions of families continue to have inadequate shelter or are severely cost burdened attempting to secure habitable shelter. As Eric Belsky from the Joint Center for Housing Studies at Harvard University remarked at a recent lecture at Harvard University, “if we can’t make inroads (against the problem of the lack of affordable units) now, will we ever be able to.”²¹ Over the past decade, public policymakers have come to accept the strategy of partnering with the private sector. The potential efficiencies of the private market have the capability of delivering affordable units in a very cost effective manner. Using a framework to create developments that consist of a mix of households with different levels of income has gained attention as a means to both combat the social ills of segregating low-income households, and ease the cost burden of providing affordable units. Mixed-income housing holds great promise as a way to mitigate some of the affordable housing crunch as well as provide incentives for all parties involved at a reasonable cost to the government.

1.3 Mixed-Income Housing: A Current Trend

Mixed-income housing is indeed the current direction of US housing policy but its appeal has also reached private developers and investors. It intends to remedy the social ills of concentrated poverty and relieve the economic burden of housing the very poor in large developments. Defined as a housing development that includes both affordable and market-rate units, mixed-income housing requires the concurrent support of both the public and private sectors through an effective public/private partnership. From a social point of view, there are a number of benefits for low-income households to live in a mixed-income environment as opposed to “ghettos” where the “culture of poverty” leads to “joblessness, drug abuse, and welfare dependency”²². Simply put, a safe and secure physical environment coupled with a beneficial social milieu is believed to improve the lives of low-income people significantly and, ultimately, help break the cycle of poverty. Numerous studies have concluded that: “concentrating poor people in poor neighborhoods perpetuates social and economic problems, and that moving to a more diverse environment encourages and enables families to improve their employment, earnings, and educational achievement”²³. From an economic perspective, adding market-rate rents to various other public and private resources targeted at low-income units helps secure the financial feasibility and long-

²¹ Eric Belsky, Lecture at Harvard University for a Seminar in Affordable Housing, July 17, 2000.

²² Paul C. Brophy and Rhonda N. Smith, “Mixed-Income Housing: Factors for Success”, *Cityscape: A Journal of Policy Development and Research*, Volume 3, Number 2, 1997, p. 4

²³ Diane R. Suchman, *Mixed-Income Housing*, (The Urban Land Institute, 1995), p. 1

term viability of this type of residential development, thereby opening the doors for sufficient incentives and profits for developers.

Mixed-income housing is not a new concept. It has been a vital component of many urban areas in America and other countries in the world. For example, two new towns of the 1960s and 1970s, Columbia, Maryland and Reston, Virginia were conceived as mixed-income communities. In New York City, mixed-income housing has been practiced for many decades as a result of rent regulation and the public housing authority's decision to bring relatively higher income families into public housing, in spite of federal pressure to house the very poor. The Commonwealth of Massachusetts has engaged in the development of mixed-income housing since the inception of the Massachusetts Housing Finance Agency (MHFA) in 1966²⁴. Although largely successful, these have been primarily isolated efforts by progressive agencies or individuals in communities with an acute need for affordable housing.

In recent years, however, there has been a renewed interest in a more concerted public/private effort to build mixed-income housing. This mainly stems from the need to use increasingly scarce public dollars to leverage private funds in order to create and preserve affordable housing and to de-concentrate poverty. Mixed-income housing is being successfully built in a wide range of urban and suburban locations. Such housing is developed to meet a variety of goals including transforming distressed public housing, stimulating the revitalization of a deteriorated section of the city, or providing affordable housing in expensive suburban neighborhoods. The federal government has recently embraced this concept, predominantly as a means to revitalize public housing. HUD's HOPE VI program, established in 1993, and the 1996 Mixed-Financing Rule, exemplify the federal government's shift toward policies that mix households with varying income levels and promote the infusion of private dollars in the development of affordable housing. Mixed-income housing strategy, as implemented by HOPE VI, is an attempt to attract higher income households to housing developments that are also occupied by low-income families and individuals. Most critical in revitalizing declining urban areas, the urban mixed-income approach depends on the buying power of higher-income residents to support local businesses. This is distinctly different than the dispersal strategy of the Section 8 rental voucher system that scatters the low-income families into more affluent neighborhoods.

This thesis is focused on a third strategy that uses public and private resources to build new mixed-income housing in suburban communities (the "suburban mixed-income strategy"). Advancing this approach is not intended to challenge the viability of the other two strategies, nor is meant to undermine

²⁴ Brophy and Smith, *op.cit.*, p. 5

their achievements in meeting the affordable housing needs of the central city and suburban neighborhoods. Rather, it is intended to meet a need that is often overlooked, yet can be addressed in a financially viable manner. There are few major reasons for an emphasis on this particular approach:

- Bringing low-income families into well-served and expensive communities already benefiting from superior school systems, greater police protection, improved sanitation, and other public services is believed to have more positive social effects. There is inconclusive research on the effect of mixed-income housing on the delivery of better services to low-income communities because of the introduction of more affluent households²⁵.
- The real estate boom has resulted in the displacement of many moderate-income residents including teachers and city employees whose income does not keep up with the rise in real estate prices. Mixed-income housing offers affordability to long-term residents who play an important role in the health and stability of these communities. The suburban mixed-income strategy fills the affordability gap for stable working families who are priced out of housing in their own communities.

As many practitioners have observed, developing mixed-income housing, particularly in affluent suburban neighborhoods, has additional challenges when compared to other types of residential development:

- These projects are often faced with neighborhood opposition mainly due to a NYMBY (“Not In My Backyard”) stance within the most affluent suburban communities.
- Due to the impact of these developments on public services, schools, and other related concerns, some local governments have set burdensome public approval processes and regulatory barriers with respect to this type of housing.
- Heavy reliance on the regional and local housing market conditions adds more uncertainty to these investments and more complexity to the transactions.
- Though less severe in suburban settings, market rate units are more vulnerable to vacancy losses and turnover. This is because higher income households have more housing choices and thus are more mobile.
- To attract market-rate tenants and minimize vacancy losses, mixed-income developments must offer superior design amenities and invest more resources in construction, management and maintenance, thereby increasing the cost of development and operation.

²⁵ Alex Schwartz and Kian Tajbakhsh, “Mixed-Income Housing: Unanswered Questions” *Cityscape: A Journal of Policy Development and Research*, Volume 3, Number 2, 1997, p. 74

In short, the combination of physical characteristics, market conditions, and community support shapes the feasibility of any mixed-income development. The 1997 analysis of seven successful mixed-income housing developments by Brophy and Smith²⁶ concluded that successful mixed-income housing:

- must emphasize the basics of real estate development and management including location, design quality, excellent management and maintenance, and financial viability;
- must do more than income-mixing and good management where the goal of mixed-income housing is upward mobility;
- will work only where there is a critical mass of the higher income market-rate units;
- works best when there are no differences in the nature and quality of units being offered; and
- is more difficult to manage when there is dichotomy between the subsidized and market-rate renters rather than a gradual climb represented by moderate-income tiers.

²⁶ Brophy and Smith, *op.cit.*, pp. 23-28

Chapter 2

Financing Mechanisms for Developing Mixed-Income Housing

Financing mixed-income rental housing is not feasible through conventional financing methods and funding sources. Funding/feasibility gaps have been always a reality in the development of affordable rental units because adding affordable units to the mix typically results in an aggregate rental income that does not generate sufficient net operating income to cover the cost of debt. Thus, financing these projects typically involves piecing together the required capital from a multitude of private and public sources. This chapter provides a brief overview of available sources of financing commonly used by developers of mixed-income rental housing.

In the past decades, the federal government has been the primary source of support for affordable housing. Federal support for privately-owned multifamily rental properties has been provided through a number of mechanisms. In tandem with federal support, state and local governments also play a critical role in providing technical and financial assistance to developers as well as regulatory and property tax relief to further encourage the provision of affordable housing. In this chapter we detail a number of the mechanisms that are currently being used to produce mixed-income housing. These financing mechanism are also summarized in Table 2.1.

2.1 Development Cost Financing Sources & Mechanisms

The following are typical sources of capital that can be accessed to help fund the cost of development or mechanisms that can be used to reduce total development costs.

Low-Income Housing Tax Credit (LIHTC)

The Low Income Housing Tax Credit (LIHTC) was created as part of the Tax Reform Act of 1986. Through the use of LIHTC, federal tax credits¹ are offered to private investors in exchange for their investment in for the development of affordable housing. In recent years, the LIHTC has been widely regarded as the primary vehicle generating the production of affordable housing as well as a significant

¹ A tax credit is a dollar-for-dollar reduction in the amount of taxes due as opposed to a tax deduction that only reduces the amount of income against which taxes are calculated.

contributor to the construction of multifamily housing in general. “Two hallmarks of the federal low-income housing tax credit program are its flexibility and decentralized character. As it has matured, the LIHTC has not only become the centerpiece of a sophisticated and increasingly efficient production system for low-income rental housing but has also provided critical financing for a broader segment of the multifamily market.”² Projects may be either new construction, rehabilitation, or acquisition and rehabilitation. For the purpose of this thesis, we will focus on new construction.

Allocation and oversight of the tax credits is typically the responsibility of state housing agencies. The agencies establish specific criteria, review proposed projects, and award the credits based upon the established criteria. These agencies must follow federal guidelines governing the tax credit program but are allowed flexibility to establish further criteria to more efficiently target the credits towards the affordable housing needs within their state. The evaluation process generally looks at how well proposed projects meet the following objectives.

- **Affordability** – federal law requires states to give preference to projects with rents below the mandated maximums, and/or projects that commit to maintaining affordable units for a longer period than the minimum.
- **Cost** – states may favor projects that are less costly to build or operate.
- **Location** – states may favor projects in particular areas over others. For instance, they may give preference to projects in the inner cities or rural areas.
- **Project and Tenant Characteristics** – states may favor projects with non-profit sponsors, which serve the homeless, and/or projects that ease the pressure on public housing waiting lists.

The LIHTC provides developers of affordable housing a vehicle through which additional capital for the project may be attained from the private sector. Typically, the developer teams up with a syndicator to market the tax credits allocated to the project to investors. A limited partnership is formed for the management and development of the project. The limited partnership allows the pass through of the tax credits generated by the property to the investor(s). The syndicator acts as an intermediary and “sells” the tax credits to the investor(s) who become limited partner(s) in the project. The tax credits are claimed annually in equal installments over a 10-year period. The timing of the capital contribution from the investor(s) is open to negotiation between the general partner(s) (the developer) and the limited partner(s) (the investors). The capital may be made at the beginning of the project (thereby reducing the initial equity the developer has to contribute) or it may be paid over the course of several years (which generally

² Michael A. Stegman, *State and Local Affordable Housing Programs- A Rich Tapestry*, (Washington D.C., Urban Land Institute, 1999), p. 71.

requires a “bridge loan” to be secured for this interim). “As the sale of credits has moved primarily to corporate limited partners able to use the depreciation benefits as well as the full value of the tax credits, the efficiency of capture of capital has increased. Developers of tax credit projects now are often able to raise invested amounts on the order of 70 percent or more of the ten-year value of the tax credits.”³ Although the tax credits are allocated over a 10-year period, the project is required to maintain the affordable units for a minimum of 30 years.⁴ After the required holding period is fulfilled, the project is usually sold and the partnership dissolved.

The federal government allocates each state \$1.25 in tax credits for each person residing in the state.⁵ Ten percent of each state’s allocation must be reserved for non-profit sponsors with many states reserving well above this minimum threshold. The limited amount of tax credits coupled with the demand from investors for these credits has made competition for the credits quite intense among developers. In general terms, the amount of tax credits awarded to a project is based upon the total depreciable cost of the project multiplied by the percentage of units within the project that are set aside as affordable. This “qualified basis” is then multiplied by either 4 or 9 percent to establish the annual tax credit the project is eligible to receive.⁶ Whether a project receives either 4 or 9 percent credit depends on the type of project being developed and the source of financing as outlined below.

Affordability Requirements - As mentioned earlier, in order to qualify for the LIHTC, owners must adhere to the guidelines of the program as outlined in Section 42 of the Internal Revenue Code as well as any further criteria set forth by the agency administering the tax credits in the state in which the project is located. The general guidelines are as follows:

- The tax credit only applies to the units in a project that are set-aside for low-income households. A project must set aside at least 20 percent of its units for households with incomes of 50 percent, or less, of area mean income (AMI); or at least 40 percent of the units must be set aside for households with incomes of 60 percent, or less, of AMI.

³ James Wallace, (From Speech given at a Symposium Sponsored by the Urban Land Institute and the Center for Housing Policy on Housing in the 21st Century), March 29-30, 1999.

⁴ The original legislation called for a commitment period of 15 years. The Omnibus Reconciliation Act of 1989 lengthened the commitment period to 30 years. Project owners are allowed to sell or convert the project to market rate housing but before doing so, the owners are required to allow the state credit allocation agency to try and locate a buyer (generally a nonprofit organization) that is willing to purchase and maintain the project with the number of affordable units that were originally agreed to be set-aside. If a buyer cannot be located, the tenants are protected with assistance for up to 3 years or when they move out.

⁵ Legislation has been introduced to increase the amount of LIHTC states are allocated to \$1.75 per resident and index it to inflation.

⁶ The tax credit statute allows the qualified basis to be increased if the project is located in a *Difficult Development Area* or a *Designated Low Income Census Tract*. In these locations, the tax credit amount is calculated based on 130% of the qualified basis.

- Low-income rents for the affordable units are restricted and are based upon the number of bedrooms in the unit and 30 percent of the corresponding AMI less estimated utility expenditures.
- The project must remain in compliance with the restrictions imposed upon it for at least 30 years.

Capital Structure Requirements - In addition to these requirements, the tax credits a project is eligible to receive are determined by the type of financing that will be used. Projects that are financed with conventional (taxable) debt generally qualify for the 9 percent tax credit. When federally subsidized funding is used, the general rules are as follows:

Federally subsidized funding that allows for the 9 percent tax credit (does not mandate the use of the 4% tax credit) includes:

- Community Development Block Grant (CDBG) Program.
- Federal Home Loan Bank (FHLB) Affordable Housing Program (AHP).
- HOME Funds – A project may utilize the one percent HOME money and retain the 9 percent tax credit rate if at least 40 percent of the project is occupied by households with very low-incomes.

Federally subsidized funding which mandates the use of a 4 percent tax credit rate:

- Tax-exempt Bonds – If the source of a project’s financing is tax-exempt bonds, the 4 percent tax credit rate is automatically triggered. However, the project does not have to compete with other projects for allocation of the LIHTCs and the tax credit allocation received does not count against the state’s cap of \$1.25 in tax credits per capita.

One of the appealing aspects of this program to lawmakers is the fact that projects receiving tax credits effectively capture the business discipline of the private sector to make sure these projects perform as promised. Tax credits are awarded to projects contingent upon the owner committing to maintaining the agreed upon number of affordable units for a period of 30 years. If the owners allow the project to fall out of compliance, a pro-rata portion of the tax credits are recaptured by the Internal Revenue Service. This provides a strong financial incentive for the investors of a project to make sure that management keeps the property in compliance during the entire commitment period.

Qualified Allocation Plans (QAPs) - Each year, states develop their QAPs to set their scoring system and priorities for the distribution of tax credits among eligible projects. QAPs are essentially the means for each state to develop, with public input, innovative housing strategies that address local needs. For example, many states are using their tax credits as a financial mechanism to preserve both their aged stock of assisted housing and continued affordability. Other states target the credits towards social service provisions, or geographically to locations with dire housing needs. The common goal of all of these

efforts is to maximize the value of the credit and stretch thee dollars to address the most pressing local housing issues. The following are specific examples of how states are “using tax credits to steer rather than row”⁷

Massachusetts’ Preservation Strategy - In 1998, the Department of Housing and Community Development targeted 60 percent of available federal LIHTC to the preservation of existing federally-assisted housing including expiring use and HOPE VI projects. While this 60 percent set-aside serves the larger projects, the state has limited the use of the remaining 40 percent to small projects with 50, or fewer, units.

New Jersey’s Multiple Priorities Strategy - To deal with a variety of competing demands, this state has established six funding cycles since 1995: urban, suburban/rural, HOPE VI, mixed-income, special needs, and a final cycle (all type of eligible projects). The mixed-income cycle is for projects in which 50 percent of the units are for low-income households and at least 20 percent are market-rate units.

California’s Deep Income Targeting Strategy - In 1996, California developed a different ranking method for the evaluation of tax credit applications. The objective was to balance the goal of efficiency with deep income targeting. The state sponsors two different types of competitions: one that ranks more affordability higher, and one that rewards efficient use of tax credits (larger number of affordable units). In the affordability competition, the projects that target households with income lower than levels required by LIHTC gain additional points. To ensure the financial feasibility of these projects, “income floors” (i.e. 35%-40% of AMI) are established.

Minnesota’s Funding Cycle Adjustment Strategy - As missing the construction season in this northern state adversely impacts the construction budget, in 1998, Minnesota adjusted the timing of the award cycle to the building cycle (spring construction start) to maintain lower construction costs.

Indiana’s Mixed-Income Housing Strategy - In 1998, this state modified its scoring system to reward mixed-income developments located in large cities. Under the system, the number of points increases if the projects meet two criteria simultaneously: 20 percent of the units are allocated to households whose income are at, or below, 40 percent AMI, and up to 50 percent of the units are reserved for market-rate tenants.

⁷ Stegman, *op.cit.*, pp. 75-86.

Accomplishments - In total, the tax credit has financed almost 800,000 housing units for lower income families. Annual production is estimated to be 100,000 housing units representing 94 percent of all low-income rental apartments in the country.⁸ “The program has produced a wide variety of housing types and served a broad range of populations, suggesting that the flexibility in the program’s design to permit state and local governments to pursue their own policy goals is working.”⁹

One of the primary objectives of the LIHTC program was to attract the private sector to the construction of affordable housing in order to leverage the limited subsidies available. This has been accomplished with the program generating \$12 billion in private investment since the mid-1980s.¹⁰ Private banks have been a significant source of mortgages and the number of different investors taking part in the program has increased steadily. “We find strong evidence that the growth of the program and the increased competition from developers and investors has led to increased efficiency in raising LIHTC equity. Over time, more of each tax credit dollar has gone directly into the projects. In addition, returns to investors have decreased over time, especially for central-city projects, perhaps indicating decreased perception of risk for these projects.”¹¹

But the program is not without its critics. “Criticisms remain because the program, through the tax credit subsidy alone, does not reach the poorest of the poor. It must be supplemented by other subsidies, such as Section 8 rental assistance or special grants and concessions from local governments or other sources.”¹²

State Low Income Housing Tax Credits

Due to the success of federal LIHTC, a number of states (seven as of June 1999) are currently offering their own state tax credits to help expand their affordable housing stock. In addition, nine more states have expressed interest in their own state housing credit programs. State housing credits differ in size, amount available, and term. Similar to the federal LIHTC, most are claimed over a 10-year period with a few exceptions such as Massachusetts (5 years), California (4 years) and Virginia (5 years). Most state credits are determined as a percentage of the federal LIHTC. For instance, Arkansas’ credit is equal to 20

⁸ The Enterprise Foundation. *Partnerships That Perform: The Low-Income Housing Tax Credit*. <<http://enterprisefoundation.org/policy/monographs/pubpul1.asp>> accessed June 22, 2000.

⁹ Jean L. Cummings and Denise DiPasquale, *The Low-Income Housing Tax Credit: An Analysis of the First Ten Years* (Housing Policy Debate, Vol. 10, Issue 2), p. 303.

¹⁰ The Enterprise Foundation, *op. cit.*

¹¹ Cummings and DiPasquale, *op. cit.*, p. 304.

¹² James Wallace, (From Speech given at a Symposium Sponsored by the Urban Land Institute and the Center for Housing Policy on Housing in the 21st Century), March 29-30, 1999.

percent of the federal credit. Some states have placed a limit on the total annual allocations such as California and Connecticut with \$50 million and \$1 million respectively. In Connecticut, eligible firms receive a dollar-for-dollar reduction in their corporate business taxes in exchange for their contributions that are capped at \$50,000 per year.

State housing credits are valued at a lower price than federal tax credits. While federal LIHTC offer investors a dollar-for-dollar tax relief for each tax credit, the state credits offer approximately 65 cents on the dollar, assuming the taxpayer is in a 35 percent tax bracket. Although state credits give relief from state income taxes, this reduction results in a higher federal income than without the state tax credits because investors can take deductions for state tax payments on their federal income tax return. The end result with state tax credits is a lower state income tax liability combined with a slightly higher federal income tax liability.

A drawback with the state housing tax credit is that it is only attractive to investors that are conducting business and paying state taxes in the state in which the qualifying project is located. This results in a more limited pool of investors. A key condition for the credit to reach its full potential is that it be “portable”. Portable state tax credits can be allocated separately from the federal low-income housing tax credits and sold to a different investor. This greatly increases the market for the credits and also allows for more structuring alternatives which in turn allows for additional equity to be brought into the deal. Currently, of the seven states that offer state tax credits, only two (Arkansas and Missouri) offer portable tax credits.

Affordability Requirements - Similar to the federal LIHTC, to qualify for state tax credits a project must have restricted rents that do not exceed 30 percent of the applicable imputed income limitation for (i) at least 40 percent of the units occupied by households having incomes of 60 percent, or less, of AMI; or (ii) at least 20 percent of the units occupied by households having incomes of 50 percent, or less, of AMI.

Massachusetts LIHTC¹³ - In January 2000, Massachusetts signed into law a State LIHTC program. The Department of Housing and Community Development (DHCD) is charged with the responsibility to authorize, administer, and determine eligibility for the SLIHTC and to allocate the credit in accordance with the standards and requirements as set forth in Section 42 of the 1986 Internal Revenue Code. The credits will be provided to qualified Massachusetts’ projects that will be placed in service on, or after,

¹³ Amendment to Chapter 63 of Massachusetts General Law, Section 31H.

January 1, 2001. DHCD can authorize credits annually for the next five years, ending Dec 31, 2005. The credit will be claimed over a five-year period against state corporate income tax, equal in size to the lesser of 50 percent of the federal per capita tax credit awarded to the commonwealth, or \$4,000,000, and would be “portable”. The state credits can be also used in conjunction with federal credits on the same project. Any amount of the SLIHTC that exceeds the tax due for a taxable year may be carried forward to any of the five subsequent taxable years.

*California LIHTC*¹⁴ - At the other end of the spectrum, California has a state tax credit program that is not a stand alone program, but rather a supplement to the federal LIHTC. This “piggy-back” LIHTC is only available for projects that are already awarded the federal credits but are not financially feasible without more equity. This particular program is designed to cover the budget shortfall for affordable housing projects in a state with excessively high development costs. Approved projects must remain affordable for 55 years. The credits are given over a four-year period using the same formula as the federal credits.

HUD HOME Investment Partnership Block Grants¹⁵

In 1990, HUD established the HOME program to provide annual housing block grants on an entitlement basis to states, larger cities, and a consortium of small communities. Grantees can use the HOME funds for four types of housing programs including rental housing production and rehabilitation loans and grants, and a 2-year tenant-based rental subsidy.

Major Requirements - The “participating jurisdictions” must use these funds in accordance with a HUD-approved Consolidated Plan; they must provide a local funding match of 25 percent of their grant; and they must award 15 percent of these funds to non-profit organizations that meet HUD specific criteria.

Affordability Requirements - At least 90 percent of the HOME units must be occupied by households earning no more than 60 percent of AMI. The remaining 10 percent is restricted to households earning no more than 80 percent AMI. In larger rental projects with more than five HOME units, at least 20 percent of all units must be rented to households earning no more than 50 percent of AMI. States are allowed to adopt more stringent income targeting rules. In Massachusetts, for instance, the Department of Housing and Community Development (DHCD) requires that 100 percent of HOME-assisted rental units be

¹⁴ Stegman, *op.cit.*, pp. 92-93.

¹⁵ Citizens’ Housing and Planning Association (CHAPA), “Housing Guidebook for Massachusetts”, Update June 1999 Edition, pp. 16-17.

occupied by low-income households earning up to 60 percent of AMI and 20 percent reserved for households at, or below, 50 percent AMI. HUD limits the gross rents that can be initially charged for HOME units. In 1999, “high rent” limits (below 60%) for a 2-bedroom apartment in the Greater Boston area was \$895, and the “low rent” (below 50%) was \$705 per month.

HUD Community Development Block Grant (CDBG)

The CDBG program was created under the 1974 Housing and Community Development (HCD) Act. CDBG merged seven categories of grant programs into a block of flexible community funds. This pioneering program gave complete discretion and an unprecedented level of control over the use of federal funds to local governments. At first, these funds were distributed as annual block grants to larger cities and counties known as the entitlement communities. In 1981, the HCD Act was revised to allow states to administer the allocation of funds to small cities and counties (non-entitlement communities). These funds are earmarked for a wide range of activities including the provision of affordable housing. HUD determines the amount of each entitlement using an objective set of population and distress measures including poverty, age of housing, and growth lag relative to other metropolitan areas.

Major Requirements - To receive its grant, a city or county must develop and submit to HUD its Consolidated Plan (the jurisdiction’s comprehensive planning document and funding application). Also, a grantee must develop and implement a detailed citizen participation plan that provides for, and encourages public participation, especially by members of low and moderate income households, in the planning process for, and actual use of these funds¹⁶.

Affordability Requirements - HUD requires several certifications including that not less than 70 percent of the CDBG funds be used over one, two, or three-year periods for activities that benefit low and moderate-income households whose income does not exceed 80 percent AMI¹⁷.

Federal Home Loan Bank (FHLB)

In response to the Great Depression, the Federal Home Loan Bank System was created in 1932 by the Federal Home Loan Bank Act to re-establish the housing market and make funds available for home financing. There are twelve District Banks that are government chartered member-owned corporations regulated by the Federal Housing Finance Board. FHLB System members include thrift institutions,

¹⁶ Department of Housing and Urban Development “CDBG Program: Entitlement Community Grant” Web Posting January 18, 2000, <<http://www.hud.gov/cpd/cdbgfct.html>> ,accessed July 13, 2000

¹⁷ Ibid.

commercial banks, credit unions, and insurance companies. There are currently 7,220 members¹⁸. Since 1989, FHLB's mission has been broadened to include affordable housing and Community Development lending. The Affordable Housing Program (AHP) provides subsidies to assist financial institutions in supporting the production and preservation of affordable housing for the lower-income families and individuals. Since 1990, the AHP has provided over \$900 million to help develop or redevelop over 200,000 housing units¹⁹.

Flow of Funds - As a government-sponsored enterprise (GSE) with Triple-A bond rating, the FHL Banks can raise debt at rates only slightly higher than US Treasury securities. Each FHLB funds its own Affordable Housing Program with 10 percent of its annual income. Financial assistance (loans or grants) is awarded through regional competition to member institutions that submit an application in partnership with for-profit, non-profit, or a government housing developer. Member lenders then use these funds to offer affordable housing grants or reduced-rate mortgages²⁰.

Major Requirements - Financial institutions can become a member if they meet certain statutory requirements including the provision of long-term mortgage loans and keeping of at least 10 percent of their total assets in residential loans²¹.

Affordability Requirement - Housing produced with FHLB funds must serve households earning less than 80 percent AMI. In 1994, 75 percent of the units subsidized under AHP were for very low-income households (below 50% AMI) and 25 percent were for low-to-moderate income households (between 50% and 80% AMI)²²

State Housing Trust Funds (HTF) ²³

Housing trust funds were the local response to the severe cutbacks of the federal support for affordable housing imposed by the Reagan Administration. They were created to protect housing assistance from political swings and shifts in housing policies, and make affordable housing projects financially feasible by filling capital shortfalls. It has been estimated that since the mid-1980s, housing trust funds have collectively invested about \$1.5 billion to create and preserve approximately 200,000 units of affordable

¹⁸ Federal Home Loan Banks Web Posting <<http://www.fhlbanks.com>>, accessed July 14, 2000

¹⁹ Ibid.

²⁰ Federal Housing Finance Board System Web Posting <<http://www.fhfb.gov/fhlbank.htm>>, accessed July 14, 2000

²¹ Ibid.

²² Michael J. Lea and James E. Wallace, "Current Practices for Financing Affordable Housing in the United States" 1996 Tri-Country Conference on Housing and Urban Issues, p. 23

²³ Stegman, *op.cit.*, pp. 199-206.

housing (average \$7,500 per unit). HTFs generate their revenues from a variety of sources including recording fees for real estate, real estate transfer taxes, impact fees, or negotiated fees with developers during the public approval process. Funds are awarded as loans or grants to non-profit and for-profit entities as well as public housing authorities, social service providers, and government agencies. These funds support a variety of housing activities including new construction, rehabilitation, rental assistance, acquisition, project-based subsidies, and social services to needy families. Listed below are two examples of HTFs.

Florida HTF - Created in 1992, this is the largest HTF in the United States. Its revenues are generated through an increase of \$0.10 per \$100 valuation in its documentary stamp tax which was further increased to \$0.20 in 1996-1997. The trust is administered by the Florida Housing Corporation that supports many programs including:

State Apartment Incentive Loan Program - provides second mortgage loans at low-interest rates for new construction, or substantial rehabilitation of multifamily rental properties. A requirement is that 20 percent of the units must be reserved for very-low income households (between 30% and 50% AMI).

Florida Affordable Housing Guarantee Program - offers guarantees on both taxable and tax-exempt loans and thus bridge financing shortfalls for the construction, acquisition, rehabilitation, or refinancing of affordable housing.

Illinois HTF - Created in 1989, this program aimed at increasing the stock of low-income and very low income housing in the state. Awards are used to finance any deficits and are provided to non-profit, or for-profit developers as grants or loans typically in the amount of \$750,000, or less. The majority of funds are allocated to projects that assist households below 50 percent AMI with the 80 percent AMI as the upper limit. The HTF's revenues are generated from the transfer tax fee charged on all residential real estate transactions.

Tax Increment Financing (TIF)²⁴

This is a tool used by some states to encourage development in designated “blighted” or urban renewal areas. TIF uses the incremental increase in taxes generated by a new project to help finance development related costs. The development related costs that are eligible for TIF are limited to activities that promote a public benefit such as site acquisition, site clearance, construction and/or reconstruction of streets,

²⁴ Denver Urban Renewal Authority Web Posting <<http://www.denvergov.org/content/466faq450.asp#link3>>, accessed August 14, 2000

utilities, parks, or other public infrastructure or the remediation of hazardous waste. The specific criteria and eligibility for TIF vary from state to state. Most state statutes require that a TIF project be located in a designated “blighted area” or an “Enterprise Zone”. Generally, the geographic boundaries of this urban renewal area also serve as the boundaries of the tax increment area. It is possible, however, to establish separate tax increment areas for individual projects within the urban renewal area. Upon adoption of the urban renewal plan, or on a project-by-project basis, property taxes are “frozen” at their existing level. The taxing authorities continue to receive tax revenue at the “frozen” base level. All supplemental tax revenue generated by new taxes above the “frozen base” is earmarked as TIF funds. This revenue can then be used to reimburse developers for their expenditures on public improvements, or can be used to secure the issuance of bonds to finance the public benefit activities listed above.

Comprehensive Permit/Anti Snob Zoning (Massachusetts)²⁵

In 1969, Massachusetts passed legislation that overrode local zoning in order to facilitate the development of affordable housing. The law (Chapter 40B of Massachusetts General Law) was enacted to stimulate the statewide development of affordable housing in cities and towns that had created a high barrier-to-entry for developers through local zoning restrictions (large lot zoning) and onerous local approval processes.²⁶ This law, which is commonly referred to as “anti-snob zoning” created two tools to achieve its goal:

- A requirement that all communities use a more expedited public approval process called the Comprehensive Permit (CP) process for proposals to develop low and moderate-income housing which require zoning and/or other regulatory relief (e.g., density bonuses and/or zoning use changes).
- A provision that a State Housing Appeals Committee can overrule an adverse local decision if less than 10 percent of the total year-round housing units in that community are affordable to low- and moderate-income residents.

Affordability Requirements - The following criteria must be met for projects to be considered affordable:

- Projects must receive federal or state funding for construction or substantial rehabilitation;
- At least 25 percent of the units must be both affordable to, and restricted for, households with incomes not exceeding 80 percent AMI, adjusted for household size at the time of admission, or at least 20 percent of the units reserved for households earning 50 percent AMI, or less;

²⁵ Citizens’ Housing and Planning Association, “Using Chapter 40B to create Affordable Housing in Suburban and Rural Communities of Massachusetts-Lessons Learned and Recommendations for the Future” October 1999

²⁶ Under conventional permitting process, a developer must file separate applications to all applicable local boards including planning board, conservation commission, board of health, etc.

- Rent and income restrictions must remain in place for at least 15 years for new construction and 5 years for substantially rehabilitated units;
- Projects must receive oversight by the subsidizing agency governed by a regulatory agreement which restricts rents and income levels;
- Projects must be subject to an affirmative fair marketing plan approved by the subsidizing agency;
- All subsidized units in rental projects count toward the 10 percent affordable housing threshold, even if not all units are affordable. For example, if a rental project is financed with a MHFA mortgage, all units count towards the 10 percent requirement, not just the affordable ones (as of 1999, approximately 86 percent of subsidized units in the state are considered affordable).

Chapter 40B is essentially an indirect form of development cost reduction tied to state and local housing programs. It can, in effect, reduce the land cost through a higher allowable density, allow residential development of land previously zoned for other uses, or result in cost efficiencies during the design and entitlement phases with a more streamlined and less costly approval process.

Even though the recent cutbacks in conventional federal and state assistance have slowed down the development activity under Chapter 40B, the statute has indeed increased the supply of affordable housing in suburban and rural communities. Studies show that close to 21 percent of all units added between 1970 and 1997, and approximately half of all suburban units between 1970 and 1986, used the CP process. Chapter 40B is believed to have played an important role in virtually all suburban developments because the threat of the CP appeal process has led many communities to negotiate in good faith with developers.

Density Bonus Program (Seattle, Washington)²⁷

Density bonus programs are standalone programs that provide a strong incentive for developers to contribute directly (build), or indirectly (provide cash), to the production of affordable housing. In 1985, Seattle created a Housing Bonus Program as part of its downtown revitalization plan to construct and preserve affordable housing (defined as housing occupied by low-income and low-to-moderate income households earning less than 50 percent, or 80 percent AMI, respectively) throughout the city.

The Density Bonus Program allows the developers to increase the density on their commercial projects in exchange for one of the following three options:

²⁷ Stegman, *op.cit.*, pp. 218-220.

- Build affordable housing as part of a mixed-use project (i.e., build on the same site that the density bonus is applied to) or at a different downtown site; or
- Contract with an affordable housing developer to build the required number of units; or
- Make a cash contribution to the city housing trust fund.

Inclusionary Zoning

Inclusionary zoning is a mechanism that creates affordable housing through either mandatory government regulation or zoning incentives to developers. The proposed projects are required to set-aside a small percentage of the units as affordable (typically for households earning less than 50% AMI). There are basically three ways in which the program can be implemented with many variations off these options.

Mandatory government regulation with no “bonus” - this requires that under specific conditions, developers of residential real estate projects must set-aside a certain percentage of units as affordable. For instance in Boston, any residential development of ten units or greater financed by a city agency, developed on city owned property, or requiring zoning relief must conform to the regulation. This can be accomplished in two ways:

- *Inclusionary set-aside* - agreeing to make 10 percent of the units on site affordable; or
- *Off-site, 15 percent set-aside* - developers can comply with the order by constructing affordable units off-site. The number of units created must be equal to 15 percent of the total units in the new development. Instead of actually building new affordable units, developers also have the option of making a financial contribution equal to the number of affordable units required multiplied by \$52,000 (the total average public subsidy required to develop a unit of affordable housing).

Under this program, half of the newly created affordable units must be affordable to households making 80 percent of AMI in the Boston metro area and the other half affordable to households making up to 100 percent of the Boston metro AMI.

Mandatory government regulation with “bonus” - this regulation is similar to the one listed above with the main difference being that the developer is given some sort of “density bonus” to help offset the affordable set-aside requirement. The density bonus permits more units to be built on the parcel thereby reducing the overall cost of land per unit to the developer. This savings in land cost per unit helps offset the cost of providing the mandatory affordable units. An example of a successful program of this type that has worked effectively for over 25 years is the Montgomery County, Maryland’s Inclusionary Zoning Ordinance. The Moderately Priced Dwelling Unit (MPDU) ordinance requires that between 12.5 and 15

percent of the total number of units in every subdivision, or high-rise building of 50 or more units, be affordable to households earning less than 50 percent of the area's median income. Two-thirds of the affordable units are sold to moderate-income first-time buyers (with conditions of sale placed on the units) and the remaining third can be purchased by local housing commissions or non-profits to be added to their affordable rental programs. The ordinance allows a density increase of up to 22 percent above the normal density permitted by local zoning. The density bonus essentially creates some "free" lots upon which the MPDU units are constructed. As a further incentive, the developer generally is able to obtain some additional market rate units equal to the difference between the density bonus and the MPDU requirement. Due to a number of factors, the majority of the housing constructed under this program has been built "for sale". The rental housing that has been built has been done so using LIHTCs. The County is now offering construction and permanent financing to encourage more construction of rental housing.

Zoning incentives - the voluntary, or incentive-based inclusionary zoning ordinance is similar in nature to that described above but relies strictly on the market for success. If a developer agrees to set aside a certain percentage of the units in the project as affordable, he/she will be rewarded with reduced land-use restrictions. This may include diminished site design requirements, waiver of development fees, increased density (the most common bonus) and/or reduced setback requirements. Whether or not a developer seeks the zoning relief will largely be based upon the perceived value of the bonus or relief.

2.2 Debt Sources & Cost Reduction Mechanisms

There are a variety of debt financing sources that provide below-market interest rates, longer mortgage loan terms, lower debt service coverage factors, and soft second loans. Some of the mechanisms described above, such as HOME, CDBG, Housing Trust Funds, and FHLB AHP can be also categorized as debt sources because their allocated funds can be in the form of loans as well as grants.

Tax-Exempt Bonds

Federal law allows state housing agencies to issue bonds for a variety of purposes for which the interest is exempt from federal income taxes. The Internal Revenue Code of 1986 restated that bonds issued by state and local governments shall be exempt from federal income taxes. The Mortgage Subsidy Bond Tax Act of 1980 (The Ullman Act) set annual caps on total bond volume for each state and imposed income-

targeting requirements on the beneficiaries²⁸. Tax-exempt bonds are subject to the annual state's private activity bond volume cap. This fixed amount of allocations (\$50 per capita per annum) results in tremendous competition for a project to be financed. As tax-exempt bondholders do not pay income taxes on interest earned on their investment, they are able to retain more of their investment income (the higher their marginal tax rate the greater the return on investment), and are therefore willing to buy these bonds at below-market interest rates. Consequently, as state and local governments borrow at a lower cost, they can pass on the such savings in the form of lower interest rates to promote the production of affordable housing. Bond transaction costs are relatively high making projects with less than \$5 million in tax-exempt bonds generally uneconomical²⁹.

Major Requirements - Developers must use at least 95 percent of bond proceeds toward "Qualified Project Costs", including land acquisition (up to 25 percent of bond proceeds) and construction costs. The cost of bond issuance paid with bond proceeds may not exceed 2 percent of the face bond amount. Also, not more than 5 percent of total square footage of a project may be set-aside for non-residential space and not more than 5 percent of total project income may be derived from commercial rents.

Affordability Requirements - Tax-exempt bond financed projects must set aside either 20 percent of the units to for residents earning 50 percent AMI, or less. These rent restrictions must be maintained for 15 years after occupancy of 50 percent of the units has been achieved. For all low-income units, rents charged cannot exceed 30 percent of the 50 percent AMI limit for each specific family size. The Code establishes two methods to monitor continuous compliance. First, the "Non Deep Rent Skewed Projects" must be selected by the owner of a project in which the difference between the market rents and low-income rents is not significant. The second, "Deep Rent Skewed Projects" are for projects with market rents exceeding two times the average rent charged for low-income rents.

Credit Enhancement

Credit Enhancements are essentially default protection provisions incorporated into bonds and other financing instruments. These are typically financial guarantees, insurance or other types of protection (e.g. collateralization³⁰, credit downgrade triggers³¹) that improve the credit of underlying debt

²⁸ Lea and Wallace, *op.cit.*, p. 19

²⁹ Michael J. Novogradac, "Financing Affordable Housing" *Commercial Investment Real Estate*, March/April 1999

³⁰ "One or more parties may agree to post collateral. Collateral levels may be fixed or vary over time, depending on the market value of the deal" in www.contingencyanalysis.com/glossarycreditenhancement.htm

obligations. This enhanced credit protection reduces the default risk and thus results in reduced interest costs and increased marketability of bond issues. The standard affordable housing industry practice has been the use of HUD/FHA Risk Sharing (mortgage credit enhancer) and investment grade Third Party (bond credit enhancer) mechanisms.

HUD/FHA Risk Sharing³² - HUD Multi-family Insurance Partnership Program is a pilot mortgage insurance program for qualified state and local housing finance agencies. Loans originated under pre-approved guidelines receive FHA insurance for fixed-rate, long-term (40-year) mortgages. HUD has delegated the lending responsibilities that include mortgage processing, underwriting, closing, servicing, and work outs to the housing finance agency. In exchange, the agency shares the risk and participates in a percentage of any losses. Typically, developers are able to obtain loans of up to 90 percent value. This innovative and efficient insurance vehicle has been very effective in reducing transaction time and increasing access to the capital markets for the production of affordable housing. A drawback of credit enhancements is their added cost. FHA application and processing fees total 1.8 percent of the loan amount. Thereafter, FHA charges an annual insurance premium of 0.5 percent of the outstanding mortgage amount³³. This cost, however, is often offset by the reduction in the rate of interest charged by HFA.

Third Party Guarantees³⁴ - This type of credit enhancement insures the timely repayment of bonds issued to provide affordable housing mortgages. Credit enhanced bonds are sufficiently secured to receive an investment grade rating from Standard and Poor's and/or Moody's. This guarantee is intended to protect the bondholders from the real estate development and market risks. The following are examples of third party credit enhancement.

Bank Letter of Credit (LOC) - Major Commercial Banks with active real estate finance departments issue LOCs to insure repayment of the bonds. These LOCs have typically a 7- to 10-year term, covering the construction period and 5 to 8 years of the operation period. LOCs are mortgage-backed and can be renewed, or paid in full, upon expiration. LOC fees generally range from 125 to 200 basis points

³¹ "In the event that one of the parties' credit rating is downgraded below a certain level by a specified credit rating service, the deal is restructured or terminated" in <<http://www.contingencyanalysis.com/glossarycreditenhancement.htm>> accessed July 22, 2000

³² New York Homes Web Posting <<http://www.nyhomes.org/hfa/creditenhance.html>>, accessed July 22, 2000

³³ New York City Housing Development Corporation NYCHDC Web Posting on 80/20 rental housing Tax-exempt Finance Program, <<http://www.nychdc.com/8020.html>> accessed July 13, 2000.

³⁴ Ibid.

annually on the outstanding debt amount in addition to an up-front fee paid at closing (this fee can be also built into the interest rate).

Surety Bonds/Bond Insurance - If the bank providing the LOC has an investment grade rating of only A or A-, the bonds will have a lower rating and, consequently, a higher coupon rate. Additional credit enhancement may be provided by a AAA insurance company or bond insurance company to reduce the interest cost. Surety bonds or bond insurance are contracts that guarantee the obligation of the bank to honor its LOC, or the issuer (HFA) to repay its bonds. Fees are typically in the range of 35-50 basis points per year in addition to the LOC fee.

2.3 Operating Cost Reduction Mechanisms

This type of mechanism assists the developer in attaining a higher NOI by reducing operating costs. The most common means of reducing operating costs of privately owned rental housing is a real estate tax abatement and/or exemption.

Tax Abatement/Exemption

Property taxation is an effective tool for local governments to regulate development and to exclude, or promote, certain uses. In exchange for affordable housing, some municipalities make concessions on property taxes, their major source of revenue. To assess the level of these concessions, local governments must strike a balance between the loss of revenue to support public services and the benefits of providing housing for lower-income working families. The following are examples of state and local tax incentive programs currently in place.

Massachusetts Chapter 121A³⁵ - This statute and regulations (MA 760 CMR 25) authorize the exemption of qualified projects from real and personal betterments and special assessments. The law requires the creation of Urban Redevelopment Corporations, which serve as the entity that develops all types of projects including residential development in areas considered to be blighted or substandard. Chapter 121A also uses tax exemption as a mechanism to induce development in areas with high property tax rates, or areas not conducive to private investments. The most frequent application of Chapter 121A has

³⁵ Department of Housing & Community Development, Web Posting entitled "Urban Redevelopment Corporation Fact Sheet", <<http://www.state.ma.us/dhcd>>, accessed July 15, 2000

been in the construction of low- and moderate-income housing. Except for 121A projects in Boston that are administered by the BRA, all qualified projects under this program are administered by DHCD.

An Urban Development Corporation, or chapter 121A entity, is officially established by a certificate issued by the Secretary of State of the Commonwealth. Non-profit organizations, for-profit corporations, joint ventures and public/private partnerships as well as insurance companies and banks can qualify under special statutory provisions. Urban Development Corporations are exempt from property taxes but they have to make three types of substitute payments to the municipality:

- *Minimum Statutory Payment* - a mandatory payment of one percent of the fair cash value of the property plus 5 percent of the gross income of the project from all sources. This payment is collected by the state and returned to the municipality.
- *Excess Income Payment* - any excess profit up to the level of taxes otherwise assessed must be returned to the municipality. 121A entities cannot earn more than 8 percent return on investment.
- *Negotiated Payment* - payment above the minimum statutory payment negotiated between the developer and the municipality, paid directly to the municipality.

*New York City Chapter 421-a*³⁶ - Department of Housing Preservation & Development administers the 421-a, Tax Incentives Program (TIP) in New York City. There are two zones established in the city for which different rules apply. Projects located outside the “Exclusion Area” (between the 14th and 96th Streets) can benefit from the following post construction exemption from the increase in real estate taxes resulting from the development. Construction period exemption of up to 3 years plus³⁷:

- 10-year (2 full years plus 8-year phase out)³⁸
- 15-year (11 full years plus 4-year phase out)
- 20-year (12 full years plus 8-year phase out)
- 21-year (12 full years plus 9-year phase out)

All rental units in the building become subject to rent stabilization for the duration of the benefits. The initial rents are set by TIP.

³⁶ New York City Department of Housing Preservation & Development, Web Posting “Building Owner Information-Tax Incentives for Affordable Housing” <http://www.ci.nyc.ny.us/html/hpd/html/tax_incentives/ahp/html>, accessed July 16, 2000

³⁷ The longer exemption periods apply in northern Manhattan and the other boroughs, and to projects that receive government assistance or contain 20% affordable units.

³⁸ This program shields against the increase in tax assessment due to new development. The taxes payable are based on pre-construction assessment. In the first two years, the pre-construction taxes are payable. In the following 8 years, the exemption phases out starting from 80% exemption from the increase in taxes to no exemption at all.

Market-rate projects located in the “Exclusion Area” are ineligible unless they receive government assistance, contain 20 percent affordable units, or the owner participates in the 421-a Affordable Housing Production Program. The 421-a AHP projects can benefit from a 10-year (2 full year and 8-year phase out) post construction exemption. An 80/20 mix can benefit from the longer exemption period. The developer has a choice to develop the affordable units either on-site or off-site. Generally one affordable unit must be financed or constructed for every five units receiving tax abatement. TIP also provides “negotiable certificates”. The affordable housing developer enters the TIP and receives certificates (one certificate allows property tax exemption for one market rate unit). He/she then sells these certificates to a developer of a market-rate project in the Exclusion Area. Negotiable Certificates usually sell for \$10,000 to \$20,000 each.

2.4 Rental Assistance

Rental assistance covers the shortfall in rents collected from low-income tenants. This form of assistance results in higher gross income, thereby increasing the NOI.

Section 8 Housing Assistance

In 1974, Congress revamped the national housing policy by providing federal subsidies directly to private owners to produce and maintain affordable housing. The Section 8 Housing subsidy expanded upon the 1937 United States Housing Act by offering a new type of subsidy that filled the rent gap for low-income families. One of Section 8’s prominent demand-side features is that it offers a wider range of housing choices to low-income families. The direct rent subsidy leads to better neighborhoods and higher quality, unsubsidized properties accessible to these families. This housing policy was a critical catalyst in the creation of mixed-income communities and a major step toward de-concentration of poverty. The program quickly became the primary source of federal subsidy for rental housing as 200,000 units of Section 8 were added to the stock of affordable housing each year. This growth continued until 1995 when the government stopped issuing certificates and vouchers for three years. In 1999, total Section 8 assistance touched over 3 million units, more than double the size of the public housing program.³⁹ Despite the freeze, Section 8 still remains the largest source of rental housing subsidy in the U.S. However, the program’s long-term viability is challenged as contracts with participating landlords are expiring. The continued affordability of many properties is at risk as owners opt out of the program and choose to convert to unsubsidized market-rate properties.

³⁹ “Opting in: Renewing America’s Commitment to Affordable Housing”, HUD publication, April 1999

HUD offers two primary types of Section 8 assistance: project-based assistance and tenant-based assistance. Under both scenarios, a household contributes approximately 30 percent of its income toward the rent of a privately owned housing unit.

Tenant-Based Certificates and Vouchers - In a certificate tenancy, the landlord agrees to a contract rent (a fair market rent set by HUD for each area with a periodic inflation-based rent escalations) and to receive federal subsidy on a certificate-holder's behalf. The tenant contributes a percentage of his/her income for rent; the rent subsidy covers the difference between the tenant's contribution and the contract rent. In a voucher system, the rent subsidy amount is fixed. If tenant elects to occupy a unit with a higher rent than the fair market rent, the tenant is responsible for the difference. The vouchers and certificates are "portable" in the sense that they remain with the tenant who can choose among units owned by participating landlords across the country.

Project-Based Assistance - In Project-Based Section 8, subsidy is tied to units or housing developments. When a family moves out, the unit is offered to another eligible family. The household that vacated has given up the subsidy. HUD contracts directly with property owners or state and local housing agencies. Under the Mod Rehab program, the agencies enter into contracts with owners who must make at least \$1,000 per unit in repairs in order to meet HUD housing quality standards. Contract rents are approved up to 120 percent of an area's fair market rent (FMR).

Section 8 Programs to Date - From 1974 to 1983, the Section 8 New Construction/Substantial Rehabilitation (NC/SR) stimulated the production of new affordable housing without direct federal mortgage subsidy. HUD offered long-term rent guarantees (20-40 year contract) plus Federal Housing Administration (FHA) mortgage insurance that allowed developers to obtain private conventional financing. This program was curtailed in 1983 in an effort to reduce social spending. Other Section 8 programs included the Loan Management Set Aside Program (LMSA), implemented from 1976 to 1996, that provided subsidy to older projects with cash flow problems; and the Property Disposition Program, established in 1978, that helped HUD sell foreclosed properties to private owners who were ensured financial stability through 15-year project-based rent subsidies for up to 100 percent of the units. The more recent Multifamily Assisted Housing Reform and Affordability Act (MAHRAA) of 1997, also known as Mark-to-Market program represents a market-sensitive solution to the problem of affordability and its long-term preservation. The program "allows HUD to mark FHA-insured mortgages on properties with expiring project-based Section 8 contracts to market rents without causing a default in their FHA

insurance. The existing mortgage will be split into a reduced first mortgage and a non-performing second held by HUD. Using comparable market rents, the first mortgage will receive a reduction in debt service⁴⁰.

Affordability Requirements - Initially, federal assistance was set at 80 percent of AMI. Later Congress enacted federal preferences that gave prospective Section 8 tenants with income below 30 percent of AMI priority placement. This was suspended in 1996. In 1981, this requirement was adjusted to below 50 percent AMI.

⁴⁰ Andrea M. Feldman, "Section 8 Reform-Carving out a Future for Affordable Housing" 1998 Guide to Affordable Housing, *Multi Family Executive*, October 1998

Table 2.1
Summary of Major Mechanisms for Financing Affordable Housing

Mechanism	Date Created	Regulator	Type of Capital	Major Requirements	Affordability Requirements
LIHTC	1986	IRS	Equity	<ul style="list-style-type: none"> - credit allocation to each state based on \$1.25 per capita -10% of each state's allocation is reserved for non-profits -limited partnership structure - credits are claimed annually in equal installments over a 10-year period - State must allocate credits to projects based on Qualified Allocation Plans (QAPs) -4% credit for acquisition triggered by Tax Exempt Bond financing, 9% credits for rehab and new construction with conventional debt financing or CDBG, HOME, FHLB AHP 	<ul style="list-style-type: none"> - 20% of units for HH earning 50% AMI or less or 40% of units for 60% AMI or less -30-year compliance period -restricted flat rents equal to 30% of corresponding AMI less utility expenditures
State LIHTC	MA-Jan 2000	MA-DHCD	Equity	<ul style="list-style-type: none"> - credit allocation based on the lesser of 50% of Federal LIHTC or \$4M -limited partnership structure - credits are claimed annually in equal installments over a 5-year period -provided to qualified Massachusetts' projects placed in service on or after January 1, 2001. DHCD can authorize credits annually for the next five years, ending Dec 31, 2005. 	<ul style="list-style-type: none"> - 20% of units for HH earning 50% AMI or less or 40% of units for 60% AMI or less -30 year compliance period -restricted flat rents equal to 30% of corresponding AMI less utility expenditures
HOME Block Grants	1990	HUD	Grants or Debt	<ul style="list-style-type: none"> - accordance with Consolidated Plan - 15% to non-profits -local funding match equal to 25% of grant 	<ul style="list-style-type: none"> - 20% of units for households earning no more than 50% AMI, in rental projects with more than 5 HOME-assited units
CDBG	1974	HUD	Grants or Debt	<ul style="list-style-type: none"> - funds target housing, community development, economic development and social service activities -Submission of Consolidated Plan to HUD -Submission of Citizen Participation Plan to HUD 	<ul style="list-style-type: none"> - activities must benefit households earning less than 80% AMI
FHLB	1932 (AHP in 1989)	Federal Housing Finance Board	Grants or Debt	<ul style="list-style-type: none"> - FHLBanks 10% annual income set-aside to provide subsidies to members -Members must make long-term mortgage loans -Member must have 10% of assets in residential mortgage loans 	<ul style="list-style-type: none"> - funds must be used to serve families and individuals earning below 80% AMI

Mechanism	Date Created	Regulator	Type of Capital	Major Requirements	Affordability Requirements
Tax-Exempt Bonds	1981	State and Local Housing Agencies	Debt	<ul style="list-style-type: none"> -at least 95% of bond proceeds must be used toward " Qualified Project Costs" -land acquisition must not exceed 25% of bond proceeds -cost of bond issuance paid with bond proceeds may not exceed 2% of the face bond amount -not more than 5% of total square footage of a project may be set aside for non-residential space and not more than 5% of total project income may be derived from commercial rents. 	<ul style="list-style-type: none"> -must set aside either 20% @ 50% AMI or less -rent restrictions must be maintained for 15 years after occupancy at 50% of the units -low-income rents cannot exceed 30% of 50% AMI for each specific family size.
NYC 421-a Tax Abatement	NA	The City	NA	<ul style="list-style-type: none"> -all rental units in the building become subject to rent stabilization for the duration of the benefits. -number of abatement schedules. 80/20s can benefit from a 20-year post construction (12-year full exemption and 8 year gradual taxation) -choice to develop affordable units on-site or off-site -also "negotiable certificates": affordable hsg developer enters the program and receives certificates (one certificate allows exemption for one market rate units), then sells these certificates to a market-rate developer in the Exclusion Area. 	<ul style="list-style-type: none"> - 20% affordable units for households at 50% AMI
MA Chapter 40B	1969	-Local Zoning Board of Appeals -State Housing Appeals Committee	NA	<ul style="list-style-type: none"> -all communities must use a more expedited public approval process (Comprehensive Permit) for low and moderate income housing zoning applications - State Housing Appeals Committee can overrule an adverse local decision if less than 10% of the total year-round housing units in that community is low and moderate income housing. 	<ul style="list-style-type: none"> -projects must be assisted federal or state subsidy for construction or substantial rehabilitation -25% @ 80% AMI or at least 20% @ 50% AMI or less. -15-yr rent/income restrictions period for new construction -project must have oversight by the subsidizing agency governed by a regulatory agreement which restricts rents and income levels. -all subsidized units in rental projects count toward the 10% affordable housing threshold,
Section 8	1974	HUD	Grant	<ul style="list-style-type: none"> - fair market rents are established by HUD for each area. - renter contributes 30% of his/her income toward rent. Federal Government pays the difference between tenant's contribution and fair market rents -annual income verification 	<ul style="list-style-type: none"> - renters must earn below 50% AMI

Chapter 3

SHARP Program

3.1 Introduction

In response to a severe shortage of housing that was affecting households of all income levels, the Commonwealth of Massachusetts created the State Housing Assistance for Rental Production (SHARP) Program. Created in 1983 and administered by the Massachusetts Housing Finance Agency (MHFA), SHARP was designed as a public/private partnership aimed to address the rental housing crisis by providing funding to induce the private sector to develop a large number of mixed-income rental housing projects throughout the state. While successfully meeting the objectives of the Program in the early years, a majority of these properties suffered serious financial distress in the economic downturn of the 1990s. Despite major financial restructuring efforts, the properties have yet to recover. In fact, parties are currently in litigation. Flaws in the capital structure, lack of proper incentives, and misalignment of risk and return expectations all played a role in the breakdown of this much needed Program. We have undertaken an in-depth analysis of SHARP a) due to it being a mixed-income program; and (b) based upon the premise that one can often learn more from failure than from success.

3.2 Background

The political and economic context of the 1980s points to the impetus behind SHARP. The following are important factors that greatly contributed to the creation of the Program.

Housing Shortage - In the early 1980s, Massachusetts faced a severe shortage of rental housing as a result of the economic downturn of the 1970s and the consequential stagnation of the housing market. The lack of new supply helped fuel rapid inflation in housing costs in the 1980s, which in turn was causing rents to rise at unprecedented levels. These events threatened the ability of the Commonwealth to retain businesses, placing future economic development at risk. The state of the development market at the time (high land and construction costs as well as very high financing rates) had essentially halted private rental development. The impact on lower-income households was extremely pronounced as virtually no affordable housing was being produced.

Lack of Federal Support - In the early 1980s, the Reagan administration decided that the Federal Government should not be in the affordable housing business and, consequently, removed the government's stimulus for the production of affordable rental housing. This federal policy decision, combined with the phase out of the production arm of HUD's Section 8 Program¹, shifted the responsibility of rental and affordable housing creation to the state level.

State's New Role - In response to the federal government's elimination of the Section 8 housing production program, the Commonwealth, under the governorship of Michael Dukakis, organized a Task Force to devise a viable housing program. The goal was to stimulate rental housing production (both market-rate and affordable) at a minimal cost to the Commonwealth. The Task Force recommended to the Governor that a new state housing program be created incorporating some features from programs proposed for other states, as well as features of the existing rental housing program (the 13A interest reduction mortgage program²) Massachusetts currently had in place, but with two important modifications. First, interest rates would only be subsidized down to five percent rather than the previous one percent; and secondly, the subsidy would be phased out over time and repaid in its entirety. While the federal Section 8 Program that was being replaced provided a "deep subsidy"³, the new Program would be based upon a "shallow subsidy" feature that would considerably lower the cost burden to the Commonwealth. SHARP also differed in that the Section 8 Program required 100 percent of the units to be occupied by low-income households and was generally targeted toward the elderly. The new Program would be designed to attract mixed-income, family-oriented households with only 25 percent of the units being set-aside for low-income households. Fundamental to the new Program was the Commonwealth's desire to strengthen the partnership with the private sector.

Tax Reform Act of 1981 and Syndication - In formulating the structure of SHARP, the Commonwealth levered off the enormous tax incentives created by the Tax Reform Act of 1981. This Act provided liberal depreciation allowances on rental property and unlimited use of passive losses to offset other income. Real estate investments that produced "paper losses" were therefore attractive to investors for

¹The Section 8 Rental Certificate Program increases affordable housing choices for very low-income households by allowing families to choose privately owned rental housing. Typically, families apply to a local public housing authority (PHA) for a Section 8 certificate. The PHA pays the landlord the difference between 30 percent of the household's adjusted income and the unit's rent.

² The 13A Program was the Commonwealth's mini-version of the federal Section 236 Program. Under the Program, lenders received payments amounting to the difference between debt expenses at market interest rates and the debt expenses at 1%. Savings were used to lower rents in the development.

³ "Deep" or "Shallow" subsidy refer to the government cost of reducing effective mortgage interest rate so affordable housing can be produced or sustained. SHARP was designed as a "shallow subsidy" program that reduced effective interest rates down to 5 percent rather than one percent as in the 13A Program, known as a "deep subsidy" program.

the tax deferral benefits they provided. Developers could either keep the losses for their own use or, as was generally the case, sell them through syndication to investors in high-income brackets who valued these benefits quite highly. Both developers and the Commonwealth recognized the value of these tax benefits and specifically categorized the SHARP subsidies as “loans” so that the developers/investors in the SHARP projects could increase their tax “losses” and the Program would be able to attract the necessary equity to make the projects feasible.

Tax Reform Act of 1986 - The Tax Reform Act of 1986 had a substantial impact on the investment in rental properties. The Act effectively barred non-corporate investors from using passive losses to shelter taxable income from other investments and lengthened tax depreciation periods thereby reducing the tax losses available to investors. The ability to deduct these losses was the primary tax incentive for these investors to become involved in rental real estate and the Tax Act of 1986 fundamentally changed the investing environment. However, this Act created Low Income Housing Tax Credits (LIHTC) which provided a new tax incentive for investing in housing constructed for low-income households. In order to keep SHARP viable during this major change to the tax law, the Commonwealth secured a special provision to the law that allowed SHARP properties that had already received funding commitments to be eligible for all of the units in the project (not just the low-income units). The SHARP properties that were constructed after 1986 were also eligible for LIHTC, but only for those units that were set-aside for low-income households. The developers syndicated both the tax credits and projected losses to investors.

3.3 SHARP’s Goals

SHARP was designed to provide financial incentives to private developers in order to increase the rental housing stock in the state. Both low-cost loans (subsidized fixed-rate first mortgages provided through the issuance of tax-exempt and taxable bonds by MHFA) and operating subsidies (provided through SHARP loans by the Commonwealth) were made available. The operational (SHARP) subsidy required was projected to decrease over time on the assumption that the projected net operating income of the properties would steadily increase. The primary focus of the MHFA under the SHARP Program was to stimulate the maximum amount of production of rental housing units while minimizing the expenditure of the State’s limited resources. More specifically, SHARP was designed to:

- Stimulate production of privately owned, rental housing in which 25 percent of the units would be set-aside for low-income households with rents for these units set at “fair market” rates. As there was a strong need for rental housing for all market segments, SHARP was designed foremost as a “rental production program” and not simply as an “affordable rental program”.

- Facilitate public initiatives to construct affordable rental housing in what had become an increasingly unaffordable market and provide expanded housing opportunities for lower-income households.
- Provide subsidies that would act as a debt service “gap filler” that would enable developers to construct new multi-family housing.
- Achieve the above with limited financial burden on the state.

The SHARP Program was attractive from a public policy standpoint for the following reasons:

- SHARP was designed as a “shallow subsidy” Program that reduced effective interest rates down to five percent rather than one percent as in the 13A Program.
- Under SHARP, subsidy loans would be limited to 15 years and decline annually.
- The assistance given would be made in the form of a loan that would eventually be paid back at the conclusion of the commitment period upon the sale or refinancing of the property.
- SHARP required at least 25 percent of the developed units be set-aside for low-income households and with the decrease in debt service achieved through tax-exempt financing, many of the market-rate units might serve moderate-income households as well.

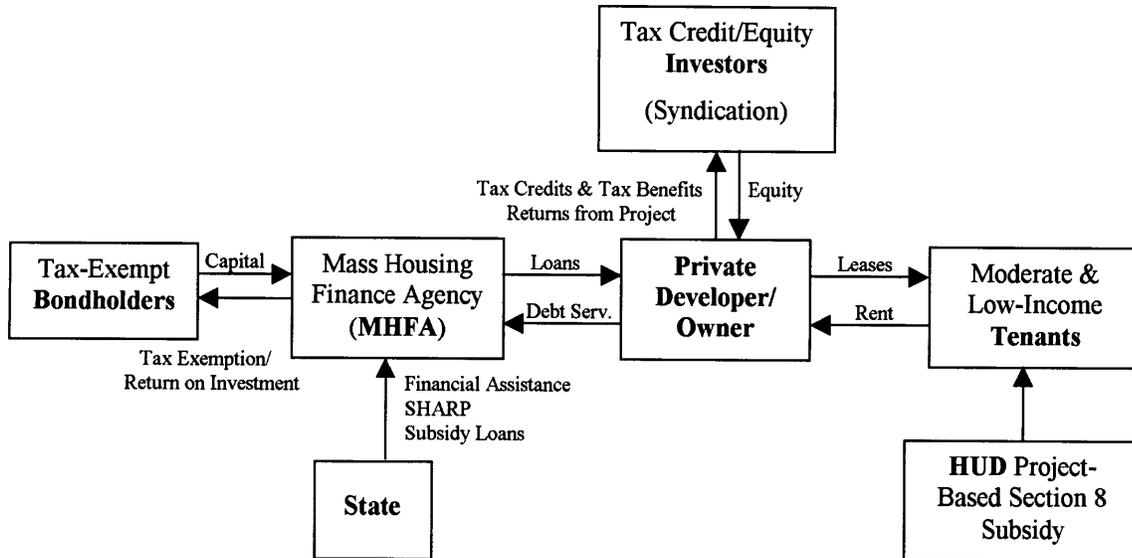
Additionally, SHARP would initially serve as an economic stimulus to the regional economy by encouraging new construction, creating new jobs, and increasing tax revenues both locally and at the state level. Essentially, the state was acting as the stimulus that the federal government was no longer providing and relying on market forces for the success of the SHARP Program. The major premise was that as inflation continued, market rents could be raised and the subsidy required to fill the gap between “cost based” rents and “attainable rents”⁴ would diminish, and the need for the SHARP loans would be gradually reduced and eventually eliminated.

3.4 Public/Private Partnership & Financial Architecture

In order to make affordable rental housing developments economically feasible in areas where market rents would otherwise be unable to support conventional financing, a variety of mechanisms – such as reduced mortgage interest rates, direct rent subsidies to tenants, state-funded interest reduction and/or

⁴ “Cost-based rent” is defined as the rent needed to support the mortgage loan and operating cost of a project. “Attainable rent” is defined as the maximum rent at which the units can be rented on the open market. SHARP was put in place to bridge the gap between the two.

operating subsidies, federal development grants and tax credits – must often be interwoven. The nature of the partnership between the public and the private sector for the SHARP Program is outlined below.



Public Partners

MHFA - Created in 1966 by state legislation, MHFA offers below-market interest loans to developers of multi-unit rental properties and first-time homebuyers through loan programs that increase the supply and long-term preservation of affordable housing within Massachusetts. At the time of SHARP's initiation, the MHFA had stimulated the investment of over \$2.4 billion in housing in communities throughout Massachusetts.

In contrast with state and federal public housing programs, MHFA does not finance publicly owned rental housing. Instead, it induces the construction of privately owned and managed apartment complexes marketed to a broad mix of households. As an adjunct to state-funded public housing programs, the MHFA operates as a self-supporting mortgage bank and conduit between capital markets and the housing industry. The Agency raises funds in the national bond market and lends out the proceeds as construction and permanent mortgage loans. As housing revenue bonds, MHFA's debt issues are secured by the value of underlying real estate; their bond debt service obligations are met by passed-through mortgage loan payments; and their bonds qualify as a type of municipal bond and, therefore, yield interest earnings which are free from federal taxation. In return for such income tax-exemption, purchasers of housing revenue bonds accept interest rates below those of comparable taxable securities. The MHFA passes these bond interest rate savings on to its mortgage loan borrowers (the developers) in order to stimulate

construction activity in the public interest. Developers seek MHFA multi-family mortgages for their long term-to-maturity, fixed interest rate, and high loan-to-value proceeds.

The Legislature designated MHFA as the sole lender and administrator for the SHARP Program. In order to raise the capital necessary to fund the SHARP Program, MHFA sold both taxable and tax-exempt bonds to private investors and used these proceeds to provide construction loans and first mortgages to the developers. The Agency lends to developers at below-market interest rates who retain ownership, but must set-aside at least 25 percent of their units for tenants who meet public housing eligibility criteria. The first mortgages were priced to the developers at the Agency's cost of funds plus .5 percent to help cover MHFA's general and administrative expenses. The interest rates on the first mortgages were priced several hundred basis points below market-rate financing at that time. The mortgage debt service payments from the developers would be used to repay the bondholders and support the administrative expenses of the Agency. Historically, the MHFA has been able to maintain a high credit rating on the bonds it issues. Maintaining a high credit rating is very important to the Agency in that it allows the bonds to be sold at lower yields than bonds issued with a lower rating.⁵ As a public purpose lender, MHFA can help persuade local governments to expedite the development of their fair share of affordable housing.

MHFA promotes its public purpose by attaching four key conditions to the SHARP financings. Participating developers must:

- reserve at least 25 percent of the units they build for tenants whose incomes qualify them for public housing;
- maintain their developments and the set-aside affordable units as rental housing for at least 15 years;
- accept a cap on direct profits from development operations: surplus income, if any, must be used to fund replacement reserves and rent reductions;
- agree to other regulations, which in effect impose Agency rent controls on the set-aside units in their developments.

Thus, MHFA serves the rental market in three ways: first, it induces private development increasing overall availability of high quality rental housing. Secondly, it seeks to promote such development in

⁵ Bonds with a higher credit rating are deemed to be less "risky" to investors. Therefore, investors in these bonds are willing to accept a lower yield (i.e. less return on their investment). Therefore, the money raised through the issuance of bonds with a high credit rating costs the issuer (MHFA in this instance) less and this savings can be extended to the borrowers (the developers) in the form of lower interest rates on their mortgages.

market areas where rental housing development is less likely to occur without public assistance. And finally, it works alongside direct subsidy programs to make a percentage of units affordable for low-income applicants.

Commonwealth of Massachusetts - Prior to the construction of these developments, financial projections indicated that the operating income of the properties would not be sufficient to cover the fixed annual mortgage debt service so SHARP “subsidy loans” were offered to bolster the operating cash flow. The SHARP subsidy loans were funded by the Commonwealth of Massachusetts and administered by the MHFA. The subsidy had the following key features:

1. the maximum SHARP subsidy for a project was based upon the difference between what it would cost a developer to finance construction of each unit at prevailing tax-exempt interest rates and what it would cost at a 5 percent interest rate. The difference represented the maximum allowable SHARP subsidy.
2. the subsidy was designed as a loan – not a grant, and although there was no predetermined “balloon” repayment date, SHARP was to be paid as the project could afford to do so; but in any event at the sale or refinancing, which may take place at the termination of the SHARP subsidy, or later during the term of the mortgage.

Federal Government/HUD - The SHARP Program relied heavily on Section 8, a federal program that provides direct rental subsidy to low-income tenants. As previously discussed, SHARP was also designed to take advantage of the tax incentives offered to real estate investors created by the Tax Act of 1981. Later on, when the tax benefits of the 1981 Act were curtailed, SHARP leveraged off the Tax Act of 1986 which offered Low Income Tax Credits and encouraged private investors to participate in the development of affordable housing.

Private Partners

Developers - SHARP re-established the private/public partnership for developing rental housing in order to take full advantage of the private sector’s expertise in development and real estate management. In return, the developers/owners were able to earn profits through substantial development fees (10 to 20 percent of total development costs) and annual property management fees. The substantial tax losses associated with the projects were attractive to investors so the developers created limited partnerships to own the properties. Through syndication, the LIHTCs and tax losses would be passed through to the limited partners (the investors). In return, the investors would provide the partnership with the capital needed to fulfill the equity requirement of the project.

Investors - The extensive tax benefits offered to investors in rental housing following the enactment of 1981 Tax Reform Act was the impetus for investor participation in the SHARP Program. These tax incentives, however, were reduced substantially by the Tax Act of 1986 which concurrently created the LIHTC. LIHTCs provide tax incentives specifically targeted to affordable housing. Although the tax savings mechanism used by the investors to generate their investment return changed over time, their interest in the SHARP Program was still driven by tax incentives.

3.5 Risk/ Return Characteristics

MHFA's Mission - As mentioned previously, MHFA used its ability to offer below-market financing with attractive terms to induce private developers into a “partnership” to build the badly needed rental housing. MHFA would supply the bulk of the capital needed and price it below market while the private developers would supply the expertise to develop and operate the projects and a limited amount of equity. But even with below-market financing, operating deficits were forecasted for the early years of the SHARP projects. MHFA was dependent on the mortgage debt service payments due from the developers to make the required payments to their bondholders. Timely payments on these loans were critical to MHFA if it was to maintain its high bond rating. If the bond ratings were allowed to slip, the Agency would become less competitive in the bond market preventing it from being able to sell their bonds at lower yields. This in turn would reduce the “discount” they could pass on to their borrowers and, in turn, reduce the effectiveness of the Agency in fulfilling its mission of inducing development through below-market financing. Therefore, the State was to offer operating subsidies to the projects (known as “SHARP subsidy loans”) that would be administered by MHFA and used to bolster the properties’ operating cash flows allowing the debt payment due MHFA to be made. The SHARP loans were put in place to ensure that the debt payments to the MHFA would not be exposed to substantial risk.

The State - The rental housing crunch was so significant it became a political issue. It had reached the stage where it was affecting all households, regardless of income. Due to cutbacks on the Federal level, the State had limited resources and was searching for ways to leverage its ability to increase the housing stock. SHARP offered the opportunity to jump start construction provided the State would subsidize the operational deficits of the newly constructed properties for a projected period that ranged up to 15 years. The SHARP model forecasted rents increasing over time at 5 percent annually, a 5 percent vacancy allowance and annual operating costs increasing at 5 percent. The model showed that under these assumptions the properties would gradually be weaned off subsidies. The State would be paid back the

money they infused into the projects as the projects achieved positive cash flows or when the properties were sold or refinanced at a later date. The State was willing to absorb this risk because they were under political pressure to increase the rental housing stock. The belief was that the economy would continue to grow for at least the next decade bringing more and better paying jobs, and thus higher rents. Some of the bonds that were issued to raise the money for these subsidies were backed by the State which, unlike MHFA, had the power to raise additional funds from taxpayers if additional subsidies were needed. Both MHFA and the Commonwealth saw limited risk associated with issuing these bonds, based on its overly optimistic economic forecasts and the political environment called for immediate action.

Developers - Under normal market conditions the development of mixed-income housing is difficult. When attempted during the prevailing market conditions of the 1980s, it became even more challenging, and without subsidies, was simply not viable. The majority of the housing units being built at that time were targeted to affluent households due to the higher profit margins and returns that could be realized. Much of the construction at the time consisted of condominium projects. The high demand for this type of housing directly competed with the resources for rental housing units and consequently drove up the cost of land and increased overall construction costs. In order to be induced to construct mixed-income housing, the developers had to be offered an attractive financing package that would allow them to reap profits and returns that were at least comparable than those offered by constructing 100 percent market rate units (i.e., condominiums). These factors played a major role in the design of the SHARP Program.

The capital structure of SHARP had a number of appealing components to the developers. The tax-exempt bonds sold by the MHFA allowed the developers access to capital that was priced roughly several hundred basis points below the market. The first mortgages also offered high loan-to-value (LTV) ratios that allowed the developers to lever up to levels approaching 100 percent. The loans were fixed-rate that insulated the developers from fluctuations in interest rates. If, as predicted, inflation continued to spiral upwards, NOI would grow but the fixed payment on the loan would remain constant allowing debt service to eventually be covered. And finally, the loans were non-recourse thereby protecting the developer should default occur on the mortgage.

In the Program, developers were allowed to earn development fees ranging from 10 to 20 percent of total development costs. When combined with the high LTV ratios offered on the mortgages, and the ability to syndicate the tax benefits, there were instances in which the developers were able to structure their deals whereby they had to put up very little of their own equity. With limited equity invested, loans that were

non-recourse, and large development fees that were received upfront, the developers had very little at risk in these projects.

The structure of the public/private partnership also allowed the developers to own and operate the projects. This provided a number of benefits, one of which allowed the developers to be paid an annual management fee that was based upon a contract amount. This provided a steady annual income that was not based upon the operational success of the project. In essence, it was a relatively risk-free return for managing and operating the project.

Another benefit was that by all projections, the properties would not be able to generate enough positive cash flow during the first ten to fifteen years of operation to pay the full debt service payment on the first mortgage. Therefore, SHARP subsidy loans were offered by the Commonwealth to fill the gap between cash flow generated and the debt service on the first mortgages. These subsidy loans were not due for payback until the properties either achieved positive cash flows or were sold or refinanced at a later date. These subsidies were intentionally categorized as “loans” to allow the developers avoid having to declare them as taxable income, thereby generating extra ordinarily large annual tax losses for their investors.

The net result to the developers were that for relatively little risk, they could build these properties with capital priced below market; earn a substantial developer’s fee; put little equity of their own into the deal; have the ability to sell the tax benefits to investors providing additional capital to the partnership and earn a steady annual management fee.

Investors - During the years that were covered by the Tax Reform Act of 1981 (1981-1986), investors were looking for projects that had large paper losses so that these losses could be written off against other income they earned. These losses could be taken regardless of whether or not the property turned a profit. The investors based their expected return on these factors continuing for at least the next decade. The major risks were if the tax laws were modified (which occurred in 1986) and if the investment partnership defaulted on its loan which would subject the investors to recapture of their tax losses. Although the tax laws did change in 1986, there were special exceptions made to the investors already committed to SHARP projects that still allowed them to reap substantial tax benefits. The LIHTC which came as a result of the 1986 Tax Act provided the investors with a more certain return as the credits were guaranteed to be realized provided the property stayed in compliance and out of default. Therefore, although the investors were subject to risks, they ostensibly did not perceive the risk to be very high.

Bondholder's Risk Profile - MHFA has an excellent reputation and historically has received very high credit ratings on their bonds. A large portion of the bonds that were issued were tax-exempt allowing the interest earned by the bondholders to be tax-free. Both of these features allow the bonds to be issued at lower yields allowing MHFA to access capital at below market rates. The bondholders were willing to pay higher prices for these bonds as long as they felt secure about repayment in full and on time. The bondholders felt assured that this was the case because:

- MHFA had an excellent reputation and track record and thus a high bond rating;
- the bonds were insured; and
- some of the bonds were issued as “moral obligation” bonds which meant that if MHFA could not cover its obligations, MHFA was required to petition the Governor who in turn would request the Legislature to cover the obligations. The Legislature is not required to do so, but is considered to have a “moral obligation” to make good on the bonds.

With these assurances, the bondholders were willing to invest in these low-risk investments and provide the capital for production of this social good.

3.6 Strengths & Weaknesses of the Program

The Program was extremely successful in its early stages and achieved one of its main objectives: thousands of units were built during the boom years of the mid-eighties. Applications exceeded available subsidy by over three to one. The SHARP portfolio eventually totaled 82 projects consisting of 9,350 units of which 3,131 (33 percent) were set-aside as low-income rentals. During the early years, the significant pent-up demand for rental housing allowed the rents to inflate as had been projected. However, years later a large percentage of the developments began to face serious financial difficulties. The economic downturn that occurred in the early nineties, coupled with tax policy changes targeted at investments made in real estate, had a significant impact on the SHARP portfolio. The unprecedented growth in condominium development followed by the housing market collapse resulted in many of the unsold condominiums flooding the rental market. SHARP developments experienced higher vacancy rates and lower rent growth than projected.

One of the impacts the Tax Reform Act of 1986 had on SHARP was that it altered the way Massachusetts could issue tax-exempt bonds to finance low- and moderate-income housing projects. The sweeping changes in the tax treatment of potential investors in real estate and bonds forced the state to adjust its policies and procedures and reaffirm its commitment to providing housing assistance to the needy. For

example, 7,600 units in the SHARP Program were threatened by the Act until the Massachusetts congressional delegation secured special tax credit transition rules.

In 1989, in response to the financial distress and anticipated operating shortfalls, MHFA began to investigate restructuring options. By 1991, a restructuring program was put into place and many of the SHARP owners agreed to modifications to the capital structure in order to maintain the financial viability of their projects. MHFA opted to increase the subsidy (rather than lowering the interest rates on SHARP mortgages in conjunction with additional capital contributions from the general and limited partners) in order to fill the widening gap between the projects' cash flows and the mortgage payments. Simultaneously, MHFA used its rights under management agreements to demand a more aggressive market-based management of these properties to boost the net operating income and make a significant improvement in financial performance.

An overall evaluation of the Program will help us determine the reasons behind SHARP's vulnerability and why its limited accomplishments have been overshadowed by its shortcomings and failures.

Strengths

Improved Program - One of the major strengths of SHARP was its ability to build upon the framework of prior housing programs and resolve some of their inherent problems. At its inception, SHARP had a very important added benefit that quickly led to its acceptance by policy-makers – a “declining subsidy” as opposed to a “flat or fixed subsidy” that had been used for public housing. SHARP was a more progressive program in that the idea of people becoming better off and real estate values appreciating overtime was embedded in the Program's structure. This was very appealing to policymakers and legislators who insisted on diminishing the financial burden of housing programs on the state.

Initial Low Cost - Another major attribute of SHARP was its initial low cost to the state due to it being designed as a “shallow subsidy” system in comparison to previous programs that centered on “deep subsidy”. Through its reliance on rent skewing rather than strictly on government rental subsidies, developments that consisted of primarily market rate units could be constructed with the market rate units helping to carry the costs of the 25 percent affordable units.

Quality Housing - By building a strong partnership with the private sector and utilizing their expertise in development and real estate management, the quality of the affordable housing produced was superior to that of the past. The market rate units had to succeed in the competitive private market so quality design and management were critical. Affordable units were required to be undistinguishable from the market rate units resulting in projects that removed much of the stigma attached to this type of housing in the past.

Leverage of State's Funds - By structuring SHARP in such a way that it took advantage of the liberal tax incentives offered by the Tax Reform Act of 1981, and later the tax credits available through the Tax Reform Act of 1986, SHARP provided very attractive financial incentives for investors to contribute much needed capital to the projects. This resulted in private developers and investors partnering together to deliver a social good while earning extraordinary risk-adjusted profits, while at the same time permitting the state to leverage its limited funds to achieve its objectives.

Weaknesses

Unrealistic Assumptions - The idea of declining subsidy could only work if the assumptions underlying the growth of net operating income were realistic. Unfortunately for all of the investors in SHARP, they were not.

1) NOI Growth - As mentioned previously, the Program had a myopic perspective in projecting the growth of NOI to rise steadily for the next 15 years. The Massachusetts economy had been booming over the past few years and it was believed this would continue indefinitely. The forecasting model completely ignored the cyclical nature of the real estate market and failed to incorporate any type of downturn in the economy.

2) Housing Market - At the time SHARP was being enacted, the demand for housing was being driven by income rather than population growth. Consequently, in the early part of the 1980's, the economic boom provided a ripe environment for SHARP to have a healthy start and rapidly produce thousands of quality affordable rental units. On the contrary, the latter part of the 1980's changed the situation drastically. Lower wages, and the massive overbuilding of previous years chilled demand for the market rate units, representing 75 percent of the unit mix and relied upon to carry the vast majority of the operating costs and debt.

3) Operating Expenses - Although the change in market conditions had a profound effect on SHARP's poor financial performance, it was not the only reason. Initial forecasts of operating expenses by the developers were often unrealistically low (approximately \$2,500/unit when \$3,500 to \$4,000 would have been more appropriate). The low operating cost projections by the developers resulted in their pro formas showing higher NOI projections than more prudent estimates would have shown. Higher levels of NOI allow for higher loan amounts. This points to an inherent incentive problem in SHARP where the structure tempts the developers to underestimate the operating expenses so they can position themselves to take better advantage of higher levels of inexpensive non-recourse debt. As operating information became available over time, MHFA found that the actual operating expenses per unit averaged over \$4,000 per unit.

4) Total Development Costs - With the tremendous growth of the condominium market in the 1980s, developers began offering units with higher and higher amenity packages (kitchen upgrades, health clubs, etc.) to make their projects more marketable and at the same time capable of demanding higher selling prices. This growing trend put pressure on the SHARP developers to include amenities in their units so that they could compete more effectively in the housing market. The developers eventually convinced MHFA that these amenities were essential features. This resulted in both higher construction and operating costs than were originally budgeted for, which in turn required deeper subsidies to make these projects financially feasible. The higher levels of debt were dependent on the projects being able to attain higher rents, which in the end did not happen to the degree that had been anticipated.

Inexperience - As in virtually any new venture, it takes time for the various parties involved to fine tune the operations to achieve a more efficient way of doing things. This was also the case with SHARP. A number of the developers who were awarded funding were experienced in public housing through the Section 8 Program, but were not well versed in housing that had to compete effectively in the private market. SHARP was designed so that 75 percent of the units would compete in the open market. These developers were not adept at marketing and often fell short of achieving competitive market rents. They were used to operating in a "subsidized world" where the objective was to simply fill units with low-income tenants (of which there were plenty waiting for a vacant unit) and rely on subsidies to make up for operating deficiencies. This inexperience resulted in rents falling well short of the market and operating costs exceeded comparable properties. Combined, this led to NOI levels that were far below expectations and investment partnerships that were financially stressed.

Misalignment of Interest - The SHARP Program had even more fundamental incentive problems associated with it.

Developers - The developer's interests were not properly aligned with the other investment parties. Few, if any, incentives were in place for the developers to work hard to maximize NOI so the developments could be weaned off of the subsidy loans and become self-supporting. In reality, there was little upside for them if operations did improve, and surprisingly little perceived downside if the properties failed to meet projected levels of NOI. Simply put, with little, if any, equity invested in these deals, the developers had little at stake after the projects were built. The increase or decrease in NOI did little to change their bottom line because:

1. surplus income had to be reinvested in the developments or used for rent reductions;
2. they had already received hefty development fees which were paid upfront. Therefore, the developers were more interested in "doing deals" and getting projects constructed so they could receive their next development fee rather than working hard to maximize the on-going operations of the properties; and
3. management fees were substantial and were for a contracted percentage amount of operating revenues that included the annual SHARP subsidy loan funding. A much more effective form of compensation would have been rewarding management based upon meeting achievable established performance thresholds.

State - The state had more at stake in the early years of SHARP when the housing crisis and the political issues surrounding it were more prominent and the emphasis was on production of rental housing. Once SHARP managed to jump-start the construction of a significant number of rental units, the state's incentive faded away. There was also a change in leadership at the State House and the Program was not a focal point of the new administration's agenda. The on-going performance of these properties was not a major concern to the state until the looming financial crisis, due to the properties not being able to reduce their required operating subsidies and still remain current on their mortgages, became readily apparent.

Investors - Ironically, even in situations where significant operating shortfalls were experienced, these properties remained viable and profitable investments for the limited partnership investors. Their returns were structured around tax incentives rather than the properties actual performance. Therefore, there was no incentive for these investors to impose more discipline on management to maximize the NOI. Operating tax losses were actually beneficial to them.

3.7 Conclusions

There are many lessons to be learned from SHARP. Although the objectives of the Program were well intended, the framework that was established to meet these objectives had serious structural flaws. In hindsight, some of the major oversights committed by the designers of the Program include:

1. A capital structure conceived with shortsighted objectives is doomed to fail. The need to construct a large amount of rental units in a hurry (whether due to political pressures or socio-economic pressures, or a mixture of both) during an unprecedented time of appreciation in real estate and development costs, led to the creation of a public/private framework that was based on subsidies rather than the efficiencies of the real estate market.
2. Because the subsidies contractually declined over time, the net operational incomes of the properties *had to go up each year*. If they didn't, there would be a default under the mortgage. A financial architecture with no inherent debt service coverage or liquidity was grossly inappropriate for an untested large-scale production program.
3. Real estate investments are subject to the cyclical nature of the real estate market which can experience dramatic downturns when overbuilding is combined with an economic recession. Financial models should be made with prudent assumptions based upon long-term historical trends rather than myopic growth expectations.
4. When entering into partnership arrangements, it is imperative to fully understand the goals and objectives (as well as the strengths and shortcomings) of each partner. Be certain that the incentives for the various investment partners are properly aligned with their rewards. In addition, returns must be commensurate with the risks taken. SHARP had conflicting goals between the parties involved and some of the parties created additional difficulties due to their inexperience. Until all parties are both capable and willing to work towards a common goal of increasing the underlying value of the asset, the long-term physical and financial viability of the project will be in jeopardy.
5. Compensation structures must have a performance-based incentives built into their framework. In addition, compensation should be earned and paid over time rather than being heavily front-loaded.

Chapter 4

The 80/20 Program

For the past two decades, the “80/20” (80% market-rate units, 20% low-income units) housing finance programs have played a significant role in the development of privately owned mixed-income rental housing. Largely due to cutbacks in federal funding during the 1980s, the financing of affordable rental housing has required a greater reliance on housing finance agencies’ ability to raise low-cost debt capital, primarily through tax-exempt bonds. Through the 80/20 Program, state and local housing agencies offer below-market, tax-exempt debt financing for the acquisition, rehabilitation and/or new construction of multifamily rental apartments in developments that reserve at least 20 percent of units for occupancy by households whose income does not exceed 50 percent AMI. Utilized by developers of new market rate rental housing and occasionally by owners of all-market rate developments seeking refinancing, the program has been instrumental in the efficient production of multifamily rental for both market-rate and affordable units.

80/20s are real estate developments driven almost entirely by the local and regional real estate market dynamics. In contrast with most affordable housing programs that have deep subsidy requirements, an 80/20 Program requires minimal government support, and only in the form of a federal tax exemption to encourage private investment in affordable housing. The below-market debt combined with the cross-subsidization achieved by renting 80 percent of the units at full market price enables the owner to charge lower rents for the remaining 20 percent of the units occupied by very low-income tenants (households at, or below, 50% AMI) yet still have a financially viable project. Some 80/20s provide additional incentives for the market-rate developers to participate in the program including density bonuses and real estate tax abatements. These additional features reduce the per unit development and operating costs thereby increasing the potential for returns comparable to projects that are 100 percent market rate.

Table 4.1 compares the 80/20 Programs administered by the MHFA and the New York City Housing Development Corporation¹. While both programs use the same primary financing vehicles (i.e. tax-exempt bond financing and the 4% LIHTC), there are a number of noteworthy differences.

¹ A public benefit corporation organized in 1972 under Article XII of the New York State Private Housing Finance Law. Though originally limited to making loans to authorized housing companies, since 1983, HDC has been enabled to finance multi-family rental projects owned by ordinary general or limited partnerships and other entities. <<http://www.nychdc.com/8020.html>>

Table 4.1
Comparing MHFA and NYC 80/20 Programs

SELECTED FEATURES	MHFA 80/20	NYCHDC 80/20
Affordability Requirement	20% @ 50% AMI or 40% @ 60% (rents charges cannot exceed 30% of AMI limit)	20% @ 50% AMI or 25% @ 60% (rents charges cannot exceed 30% of AMI limit)
Financing Mechanisms	Tax-Exempt Bonds +4% LIHTC	Tax-Exempt Bonds +4% LIHTC
Type of Loan	Construction, Permanent & Bridge Financing	Construction & Permanent
Loan Term/Amortization	30- or 40-year	30- or 40-year
Maximum Loan amount	90%	90%
Debt Service Coverage Ratio	1.1	1.1
Credit Enhancement	HUD/FHA Risk Sharing, LOC or cash security as bond insurance	FHA, Federal National Mortgage Association-FNMA, State of New York Mortgage Agency-SONYMA mortgage insurance, Third Party (LOCs, surety bond, bond insurance)
Real Estate Tax Exemption	None	20-year 421-a
Zoning/Density Bonus	Comprehensive Permit (Chapter 40B) MHFA is empowered to issue site approval for a comp permit application	None
Market-Rate Rent Stabilization Period	None	as long as 421-a benefits
Low-Income Rent Stabilization Period	15 years, or as long as the tax-exempt bonds are outstanding	15 years or as long as 421-a benefits, or the tax-exempt bonds are outstanding
Other	One Stop Application	None

The most significant difference is the incorporation of the 421-a property tax abatement into the NYC's 80/20 Program. Projects financed through the 80/20 Program in NYC are eligible for the longer 20-year 421-a benefit schedule. This schedule calls for real estate taxes to remain at the pre-development level for the allowable 3-year construction period and continue to remain at this level for another 12 years, after which the taxes are gradually increased over the next 8 years culminating at full assessment.

Strengths

The 80/20 Program has been an effective program from both the demand-side (renters) and supply-side (developers and investors) perspective. Its strengths can be summarized as follows:

No Subsidy Requirements - This is a market driven program with sufficient incentives to encourage the private developer to set aside the mandatory number of affordable units in an otherwise conventional multifamily housing development. Experts in the field recognize that “successful development of mixed-income communities - as with other types of development - depends upon a careful assessment of the market. Such assessments provide not only the information needed to design a project to meet market demand, but also the information lenders need to assess the potential risks and returns”². Thus, careful planning and special attention to the fundamentals of real estate development and management ensures quality housing that allows income mixing without the need for prohibitive costs to the government.

Design Quality - The market sensitivity of mixed-income projects (i.e. the need to attract and keep market-rate renters), necessitates superior design and amenities including siting, architectural details and finishes, and attractive common facilities that characterize a well conceived, market-rate community. Design attributes such as unit size and configuration, development density, open space and the like greatly influence the appeal of mixed-income housing. “It goes without saying that the stereotypical high-rise public housing with skip-floor elevators, doorless closets, bleak design, poor construction, and inadequate maintenance is unlikely to attract households of any income level”³. These benefits are equally enjoyed by various income groups through similar unit design and use of common facilities and activities. In sum, low- and moderate-income families can take advantage of a much higher-quality physical environment, not otherwise accessible to them through other housing programs.

Top-Quality Management - Aggressive market-based property management is another prerequisite for any 80/20 project to succeed. Strong professional management is key to building a common culture and a sense of community in these developments, which are as critical to the viability of these projects as are well-maintained physical structures. Other highly valued attributes of quality management are safety, security, cleanliness, and prompt and courteous handling of maintenance requests. This is a major benefit to all tenants as well as an effective marketing tool. Unlike public housing where incentives are not in

² Diane R. Suchman, “Mixed-Income Housing” The Urban Land Institute, 1995, p. 3.

³ Alex Schwartz and Kian Tajbakhsh, “Mixed-Income Housing: Unanswered Questions” *Cityscape: A Journal of Policy Development and Research*, Volume 3, Number 2, 1997, p. 77

place to encourage strong management, an 80/20 project's financial viability is largely contingent upon competent management that fully understands the demands of a market-based rental project.

Better Neighborhoods - As with all real estate, location is a key determinant of market appeal. It goes without saying that poorly located mixed-income developments are not attractive to middle- and high-income renters who have locational choices. Remotely located housing in areas with abandoned buildings, street crime, poor highway and public transportation access, and far from employment centers will either have severe vacancy losses or will not meet the income-mixing goal. The economics of an 80/20 project force the developer to select more desirable neighborhoods and strong market areas in which to develop mixed-income housing.

Market-Based Expertise - Given the need for market-oriented development and management expertise, and without reliance on government subsidies, the vast majority of the 80/20s have been developed by market-rate developers. This has allowed the real estate fundamentals to drive the development and management decisions ensuring the long-term physical and financial viability of these developments.

Additional Incentives - Both the Massachusetts and New York City programs have important features that have been extremely effective in encouraging participation in the program. In NYC, the longer tax exemption period of the 421-a program linked to the 80/20 Program is even more vital than the low-cost debt in realizing a healthy stream of cash flow⁴. In Massachusetts, MHFA reports that the ability to obtain site approval for a Chapter 40B comprehensive permit application, often including a density bonus, has been the main trigger for attracting reputable developers to build mix-income housing⁵.

Weaknesses

Serving The Very Poor - The 80/20 Program has been criticized for its inability to reach the poorest of the poor provide housing. MHFA reports that a number of its 80/20 projects are currently serving households at or below 30 percent AMI (a sufficient number of low-income households that fell within the parameters of 50% AMI could not be found). In these cases, however, the program has been supplemented by federal and state rental assistance (Section 8 and MRVP⁶ certificates)⁷.

⁴ Bill Sandholm, Rose Associates, Inc. (NYC-based development firm), personal interview, June 29, 2000

⁵ Nancy Andersen, Massachusetts Housing Finance Agency, personal interview, June 20, 2000

⁶ Massachusetts Rental Voucher Program

⁷ Alice Senturia, Massachusetts Housing Finance Agency, personal interview, July 7, 2000

Higher Costs - Some experts have argued that mixed-income housing is a more expensive undertaking for the production of affordable housing. Schwartz and Tajbakhsh have concluded “to attract market-rate tenants and minimize vacancy losses, sponsors of mixed-income housing may need to invest more resources in construction and maintenance than they would if their housing were occupied solely by the poor”⁸. Quality housing indeed has a price. Achieving a higher quality design, offering an attractive package of amenities, and benefiting from extensive market-based development experience impacts the cost of development. If the 80/20 Program is rightfully considered a market-rate program, then the cost of producing this type of housing should not be deemed excessive.

⁸ Schwartz and Tajbakhsh, *op.cit.*, p. 75

Chapter 5

Financial Model for Mixed-Income Housing Development

This Chapter presents an overview of our Financial Model that was developed as a tool to explore a new financial architecture for developing mixed-income housing. This Chapter first provides a detailed description of the Model's assumptions, the calculation methodology, and the sources of data that were consulted for costing and trending. Presented next is our Baseline Scenario and our proposed capital structure. The Model is then used to run a number of sensitivity analyses which evaluate the impact of changes in key variables on required development capital and investment returns. The Chapter concludes with an analysis of the risk and return to each of the principal investors.

5.1 Assumptions and Methodology

Our project is largely modeled after several 80/20 projects that have been developed in the suburbs of Boston. MHFA provided us with recent audited project and operational costs for several 80/20 projects it has financed. Construction costs for one of the projects were for 1999 and, therefore, should be a very good measure for comparison. A large development company that has a portfolio of 80/20 projects also provided us cost figures for the development phase of their projects. Finally, for both operational costs and growth rates we used audited ten-year weighted-averages from the SHARP portfolio to impose the financial stresses of a significant real estate cycle on our Model.

Project Size - In determining the number of units for our Model, we separated out the developments in the SHARP portfolio that are located in the suburbs. We found that they ranged from roughly 100 to 150 units. The 80/20 developments we analyzed ranged from 80 to 200 units. We decided to use the average size of a SHARP development (125) which was also in keeping with the size of projects currently being built under the 80/20 Program.

Unit Distribution/Mix - We found that the 80/20 projects developed in the suburbs typically had two-thirds of the project built as 2-bedroom units and the remaining one-third as 1-bedroom units. We have 80 percent of the units targeted for households in the 120 percent AMI bracket and 20 percent of the units set aside for households in the 50 percent AMI limit. The market-rate units were targeted for households

at 120% AMI because the rents these households can afford to pay were in line with (and approximately equal to) the rents being received in the 80/20 projects we analyzed.

Unit Size - We took the average square footage for 2-bedroom and 1-bedroom units of the 80/20 developments we believed were similar to our base Model. Our market research confirmed that the market rents assumed in this Model are currently being charged for these unit sizes (See Appendix C). Given that the Model assumes operation in two years (i.e. 2002), we are confident that this current level of market rents is achievable. Our Model excludes 3-bedroom units not only for project cost-related purposes but also in consideration of the impact on the Municipality's decision to offer tax abatement to the Developer. Our Model, therefore, recognizes the trade-off between the project's financial feasibility through real estate tax abatement/deferral and the project's likely fiscal impact to the Municipality due to the higher cost of public service provision (i.e. impact on school budgets). To compensate, however, our project contains fairly spacious 1-bedroom and 2-bedroom units.

SHARP Portfolio

The Model uses actual, audited data derived from a portfolio of 23 mixed-income SHARP properties. These are all the SHARP properties for which 10 years of audited financial statements were available. We believe that the operating performance of this portfolio from 1990 to 1999 accurately represents the potential cyclicity of the multifamily mixed-income rental market.

The higher ratio of affordable units in the SHARP portfolio as compared to 80/20 projects supports our claim that the Model uses conservative assumptions. SHARP is considered a worst case scenario not only because of a higher level of low-income units but also because of the inherent problems with the Program including an ill-conceived capital structure and severe misalignment of interests discussed in Chapter 3.

The following Table 5.1.1 provides general information about these properties.

Table 5.1.1
General Information on SHARP Portfolio

SHARP Properties	Location	Total # Units	# Market Rate Units	% Market Rate	# Low Income Units	% Low Income
Anchorage Apts	Boston/Charlestown	112	83	74%	28	25%
Anchor's Weigh	Chelsea	87	65	75%	22	25%
Blue Hills Village	Canton	98	73	74%	25	26%
Highland Apartments	Cambridge	117	87	74%	30	26%
Church Corner	Fall River	85	62	73%	23	27%
Kimball Court Apts	Woburn	184	138	75%	46	25%
Littlebrook	Hudson	96	72	75%	24	25%
Malden Gardens	Malden	140	105	75%	35	25%
Mariner's Hill	Marshfield	90	67	74%	23	26%
Mill Valley Estates	Amherst	148	89	60%	59	40%
No Stoughton Village	Stoughton	100	75	75%	25	25%
Olde Derby Village	Norwood	139	104	75%	35	25%
Oxford House at Queen	Clinton	203	151	74%	51	25%
Plantation Tower	Worcester	107	80	75%	27	25%
Pond Side at Littleton	Littleton	90	58	64%	32	36%
Ramblewood II	Holbrook	138	103	75%	35	25%
Riverboat Village	South Hadley	170	127	75%	43	25%
Ships Watch	Fall River	99	74	75%	25	25%
Stone Brook Farm	Burlington	203	151	74%	51	25%
Summer Hill House	Boston/JP	75	56	75%	19	25%
Taunton Woods	Taunton	120	90	75%	30	25%
The Millery	Beverly	98	73	74%	25	26%
The Royal Worcester	Worcester	155	116	75%	39	25%
Village at Mansfield Depo	Mansfield	150	112	75%	38	25%
Total Portfolio		3,004	2,211	74%	790	26%

Growth Rates

Table 5.1.2 shows the annual percent changes in gross rental income, real estate taxes and operating expenses of our portfolio. Detailed information on SHARP portfolio income and operating performance as well as other data used in the Model is presented in Appendix A.

Table 5.1.2
SHARP Portfolio Growth Rates

SHARP YEARS	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Gross Rent	-	0.09%	-0.05%	-0.03%	3.45%	2.36%	2.57%	3.44%	6.36%	4.80%
Operating Expenses	-	-1.82%	7.29%	0.87%	4.53%	-2.38%	3.11%	-1.98%	-4.44%	9.70%
Real Estate Taxes	-	7.78%	-8.72%	4.69%	3.68%	0.11%	-0.92%	3.46%	2.83%	2.99%
MODEL YEARS	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16				

The Model assumes the above rates as growth rates for each of the corresponding line item in the operating pro forma. Growth rates in the Model years 11-16 are the same as years 1-6.

Total Development Cost (TDC)

Land Costs

Land costs vary considerably from town to town and are largely dependent on the rents that can be attained from units built in that particular location. In reaching a figure to use in our Model, we assumed that the site contained no limiting factors (i.e. contaminated soil, disproportional amount of wetlands, etc.) that could add substantially to the development cost. We contacted several real estate brokers to determine the current cost of raw land that met the parameters of our project. We found that prices were extremely dependent on location and whether the parcel was already approved for multi-family development. We attempted to find prices for land that was not already permitted so that the Developer could bring additional value to the project by using his expertise to move through the permitting process in a more timely manner. The investment returns projected by our Model for the Developer takes into account the risks encountered during the permitting process and value the Developer brings to this process.

Hard Costs

Direct Construction - These costs were based upon the audited reports MHFA provided on the project costs for three 80/20 developments that were constructed in the suburbs of Boston (including one built in 1999) and the costs disclosed to us by the Developer of 80/20 projects in the Boston area. The hard (direct) construction cost for the 1999 development was \$67 per square foot, exclusive of contingencies, contractor's fee, and overhead. Our Model uses \$80 per square foot to adjust for inflation and contractor's fees and profit.

Construction Contingency - The Model's construction contingency is 7.5 percent of the direct construction costs. Although the projects we were provided costs for had budgeted contingencies below 7.5 percent, we chose to be conservative.

Soft Costs

We have provided a fairly detailed breakdown of the various development costs that are categorized as "soft costs". These costs were taken from the cost information provided by both MHFA and from the development company. More specifically, the construction loan interest is assumed to be 3.5 percent of the direct hard costs. The MHFA application, financing fee and construction inspection fees are currently set by the agency at 0.3 percent, 2 percent, and 0.5 percent, respectively. Real estate taxes during

construction are assumed to be 25 percent of post-development taxes for two years. Although individual line items may be slightly more, or less, depending on the particular project, the combined total we depict is roughly equal to the soft costs we analyzed. We provided a soft cost contingency of 5 percent, which is in line with the projects we examined.

Developer Overhead

The allocation of Developer's overhead was based upon the cost certifications from MHFA.

Development Fee

The development fee is calculated as a percentage of "qualifying development costs" which is the result of total development costs less developer overhead and less reserve allocation. The adjusted cost basis is then broken down into three increments with a progressively lower percentage fee applied to each higher increment of development cost. The rationale behind this is that there is some degree of "economy of scale" in a development project – a large project that has development costs that are twice that of a smaller project does not normally require twice the developer's time. This system is, therefore, more equitable in determining a fair development fee for small projects and large projects. The resulting fee in our project was approximately 6.2 percent total development cost (exclusive of development fee), which we felt was appropriate for a project of this scale and difficulty. (See Appendix D)

Project Operations

Income

Rent

First Year – The rents used for 50 percent and 80 percent AMI are based upon the MHFA's 2000 income limits for the Boston Metropolitan Area. These rents are calculated using HUD's determination of AMI for the Boston PMSA for 2000 (\$65,500). The 120 percent AMI is our calculation following the same formula used for 80 percent AMI.

Notes:

- 1) income is based upon a family of four – adjustments are made for smaller households;
- 2) 1 bedroom units average the income limits for 1 and 2 people;
- 3) 2 bedroom units assume dwelling can house 3 people and therefore uses 3 person income limit;
- 4) rent for 50 percent AMI are established using 30 percent of income less utility allowance;
- 5) rents for 120 percent AMI 30 percent of income, utilities are not deducted.

50% of Area Median Income:

1 Person Limit = AMI (\$65,500) x 50% = \$32,750 x 70% = \$22,950
2 Person Limit = AMI (\$65,500) x 50% = \$32,750 x 80% = \$26,200
3 Person Limit = AMI (\$65,500) x 50% = \$32,750 x 90% = \$29,500
4 Person Limit = AMI (\$65,500) x 50% = \$32,750

1 Bedroom Rent = (\$22,950 + \$26,200) x 50% x (1/12) = \$2,047 x 30% = \$614 less utility allowance
2 Bedroom Rent = (\$29,500) x (1/12) = \$2,458 x 30% = \$738 less utility allowance

80% of Area Median Income:

income limits for 80% AMI calculated at 160 percent times the 50 percent median income limit (due to unusually high incomes in the Boston area, the 80 percent AMI limit for 4 people is “capped” at the U.S. median income of \$50,200).

1 Person Limit = AMI (\$65,500) x 50% x 160% = \$52,400 (use cap of \$50,200) x 70% = \$35,150
2 Person Limit = AMI (\$65,500) x 50% x 160% = \$52,400 (use cap of \$50,200) x 80% = \$40,150
3 Person Limit = AMI (\$65,500) x 50% x 160% = \$52,400 (use cap of \$50,200) x 90% = \$45,180
4 Person Limit = capped at the U.S. median income of \$50,200

1 Bedroom Rent = (\$35,150 + \$40,150) x 50% x (1/12) = \$3,138 x 30% = \$941
2 Bedroom Rent = \$45,180 x (1/12) = \$3,765 x 30% = \$1,130

120% of Area Median income:

(formula used is identical to that used for 80 percent AMI with exception being that a cap was not placed on income limit)

1 Person Limit = AMI (\$65,500) x 50% x 240% = \$78,600 x 70% = \$55,020
2 Person Limit = AMI (\$65,500) x 50% x 240% = \$78,600 x 80% = \$62,880
3 Person Limit = AMI (\$65,500) x 50% x 240% = \$78,600 x 90% = \$70,740
4 Person Limit = AMI (\$65,500) x 50% x 240% = \$78,600

1 Bedroom Rent = (\$55,020 + \$62,880) x 50% x (1/12) = \$4,913 x 30% = \$1,474
2 Bedroom Rent = \$70,740 x 50% x (1/12) = \$5,895 x 30% = \$1,769

Growth Rates - the annual growth rates used for rents is the weighted-average of the annual increase in gross rents experienced by the SHARP portfolio.

Utility Allowance - Figures provided by MHFA for an 80/20 project that was recently constructed and has reached stabilized operations. Please note that a utility allowance deduction is only required for the affordable units.

Vacancy Allowance - The vacancy for the SHARP portfolio trended at below 5 percent – a number typically used by underwriters in determining a project’s effective income. We, therefore, chose to use 5 percent as a more conservative approach than the actual SHARP experience.

Annual Expenses

Operating Expenses - Based upon the weighted average of the SHARP portfolio and the weighted-average of several 80/20 properties that had achieved stabilized operations.

Growth Rates - Derived from taking a weighted-average of the SHARP portfolio.

Real Estate Taxes - This expense was calculated by taking the SHARP weighted-average for 1999 and then adding 2.5 percent to escalate the taxes for year 2000.

Growth Rates - calculated based upon the weighted-average of the SHARP portfolio. Although the growth rates for the portfolio of SHARP properties have substantial volatility in the first few years, we discovered in our interviews with developers that assessors often are uncertain how to tax mixed-income projects. Often the taxes are assessed as if the project is 100 percent market rate. However, this does not take into account that at least 20 percent of the project has “caps” placed on the rents. Therefore real estate tax adjustments (abatements) are typical.

Real Estate Tax Abatement - The Model assumes a tax abatement mechanism similar to the New York City 421-a program embedded in the NYC Housing Development Corporation’s 80/20 Program. The 20-year abatement is calculated based on a 10-year full exemption from the increase in real estate taxes due to development and a 10-year phase out (90% exemption on year 11th, 80% exemption on year 12th and so on). The predevelopment taxes, carried for the first ten years are assumed to be 25 percent of the first real estate taxes calculated as above. (See Appendix E) Unlike the NYC program, our Model assumes that the municipality will recover a portion of the unpaid taxes (50%) at the time of reversion in year 15. Furthermore, the Model assumes a state’s reimbursement of 75 percent of annual tax abatement to the Municipality. This tax abatement lien is equivalent to a soft second mortgage. The Municipality stands behind the first mortgage for repayment from the project’s sale proceeds. The Developer is, however, entitled to receive interest-only payment on the deferred portion of its development fee, commencing in the sixth year of operations.

Replacement Reserve - Calculated based upon MHFA’s program requirement of \$275 per unit to which we added \$25 per unit to be conservative. This also is roughly equivalent to the amount set aside by the SHARP portfolio.

Growth Rates - Instead of using the SHARP growth rate which fluctuated greatly, we chose instead to use a more conservative approach and apply the commonly accepted inflation rate of 3 percent.

Capital Structure

The following describes the Model's assumptions regarding the sources of debt and equity used to raise the capital needed for an 80/20 mixed-income housing project.

Sources of Debt

Permanent Financing - The Model uses MHFA's tax-exempt bond financing for the permanent loan. This is a 40-year mortgage note accruing interest at the current (July 2000) MHFA rate of 6.75 percent plus a mortgage insurance premium of 0.375 percent and an MHFA override (administrative fee) of 0.5 percent, per annum. The debt service in the Model is thus based on a 7.625 percent interest rate and amortization term of 40 years. The annual payment constant is 0.0805. The Model derives the loan amount by first obtaining the maximum debt service based on the first-year's projected net operating income divided by a debt service coverage ratio of 1.15, which is then divided by the annual constant of 0.0805.

Developer's Note - To better align the interests of the Developer with the long-term operating performance of the project, the Model proposes a deferred compensation mechanism to the Developer in form of a subordinate loan. Seventy five (75%) percent of the Developer's total development fee is financed by this note. This is an interest-only subordinate loan with the Applicable Federal Rate at 6 percent. The annual interest amount accrues until year six when interest-only payments to the Developer commence. The Model assumes that the outstanding Developer's loan amount will be fully paid at the time of reversion in year 15 (although it is subordinate in lien priority to the MHFA first mortgage and the municipality's tax repayment second mortgage).

Sources of Equity

Federal LIHTC - Qualified projects financed with tax-exempt bonds automatically qualify for 4 percent low-income housing tax credits. Therefore, proceeds from the sale of the credits are used as a major source of equity in the Model. The credits are calculated by multiplying the Total Eligible Basis (Total Development Cost less Land) by the percentage of the project's low-income units (20%) to obtain the Qualified Basis. The maximum annual tax credits obtained by the investors is the product of the

Qualified Basis and 4 percent tax credit rate. The current market-rate investment amount for these credits is 78 to 82 cents per dollar of credits required¹. This is the net equity capital that is contributed to the partnership which owns the property. Adding the costs associated with syndication, legal work, acquisition expenses, and a working capital reserve called the “load”, the Model assumes a 0.94 syndication factor. The net equity raised through these credits is equal to the amount that the investors are willing to pay (the product of the total allocated credits and 0.94), less the load. This load is heavily negotiated and varies between 10 percent and 15 percent. The Model assumes a conservative 15 percent for additional costs to the investors².

State LIHTC - The Model also assumes the use of state low-income tax credits. These credits are 50 percent of the federal LIHTC and are claimed over 5 years. The Model assumes a 0.39 syndication factor for the state LIHTC. The state credits have a lower market value because they result in an incrementally higher federal income tax liability. The net equity raised follows the same load calculation explained above.

Additional Value from Operations - The tax credit equity investment amount discussed above is calculated on a breakeven basis. This means that cash flow from operations is disregarded by assuming that the net operating income is equal to the debt service. The tax credit calculation further assumes a foreclosure in Year 15. This means that the sale price is equal to the amount of outstanding debt on the property plus \$1. Our Model, however, considers the additional value extracted from the annual cash flow and the sale of the property (at a 9.5% capitalization rate) as another source of equity. The Model assumes that the investors would be willing to invest more equity into the project if they could attain a 10 percent after-tax return on the cash flow and residual value upon sale (such cash flow and residual value are often retained by the Developer through various financial structural mechanisms). This equity is calculated with the assumption that the cash flow and net cash from sale is shared between the Developer and the investors on a 25/75 basis, respectively. The Model incorporates the NPV of this 75 percent share of investors’ additional investment value, using a 10 percent discount rate, as additional equity available for the project. In addition to raising sufficient equity to develop the project, aligning the interest of the parties is undoubtedly another advantage of the investors’ further participation in the operational risk of the project.

¹ Armando Perez, Lend Lease Real Estate Investment, personal interview, July 19, 2000

² Armando Perez, Lend Lease Real Estate Investment, email communication, August 8, 2000

5.2 Baseline Scenario

This section presents the results of running the Financial Model using the assumptions described above. The purpose of the baseline scenario is two fold. First it proves that the new capital structure for developing mixed-income housing proposed by this thesis is feasible. Second, it is used as a tool to examine the sensitivity of variables that can be influenced in the conception of the project, including location (land cost), income mix, and size of project.

General Description of the Project

The baseline scenario assumes a 125-unit multifamily mixed-income project located in the suburbs of Boston, Massachusetts. The units are attached, townhouse style dwellings with wood frame construction. Amenities include tennis courts, swimming pool and a small clubhouse. Table 5.2.1 shows the income and unit mix of the project as well as the gross square footage for each unit type.

Table 5.2.1
Baseline Scenario: Unit & Income Mix

AMI	2 BR (1,150 sf)	1 BR (950 sf)	Total	%Total
120%	67	33	100	80%
50%	18	7	25	20%
Total	85	40	125	

Total Development Cost (TDC)

Table 5.2.2 shows that the project's TDC is approximately \$19 million or \$154,000 per unit. These totals are inclusive of the land cost assumed to be \$20,000 per unit. These costs are confirmed as being in line with current market experience in metropolitan Boston area. The cost per gross square foot is based on an efficiency ratio of rental square footage to total gross square footage of 88 percent. This ratio is an average taken from other recent MHFA's 80/20 projects. Given that the rentable area is set per the above market-adjusted unit size, the higher the efficiency rate, the lower the cost of constructing the project.

Table 5.2.2
Baseline Scenario: Total Development Cost

	Total	per Unit	per GSF
Land Costs	\$2,500,000	\$20,000	\$16.21
Hard Costs			
Direct Construction	\$12,375,000	\$99,000	\$80.22
Construction Contingency	928,125	7,425	6.02
Hard Cost Total	\$13,303,125	\$106,425	\$86.24
Soft Costs			
Architecture and Engineering	\$362,500	\$2,900	\$2.35
Survey and permits	100,000	800	0.65
Legal	112,500	900	0.73
Title and recording	31,250	250	0.20
Accounting & cost certification	6,250	50	0.04
Marketing & rent-up	143,750	1,150	0.93
Real Estate Taxes	91,673	733	0.59
Insurance	28,125	225	0.18
Appraisal	6,250	50	0.04
Construction loan interest	437,500	3,500	2.84
MHFA application fee	47,250	378	0.31
MHFA finance fee	314,750	2,518	2.04
MHFA construction inspection	78,750	630	0.51
Soft Cost Contingency	88,027	704	0.57
Soft Cost Total	\$1,848,576	\$14,789	\$11.98
Developer Overhead	\$500,000	\$4,000	\$3.24
Developer Fee	\$1,080,710	\$8,646	\$7.01
Total Development Costs	\$19,232,411	\$153,859	\$124.67

Rental Income

Based upon the assumptions detailed in previous section, the gross rental income included in the baseline scenario is estimated to be approximately \$2,187,000 in the first year. This rental income is calculated based on 30 percent of monthly gross income of households at 120 percent and 50 percent AMI (Boston's AMI is \$65,500 per year). The utility allowance is deducted from the low-income rent. The following Table shows the results of these calculations. It can be observed that approximately 92 percent of this rental income is derived from the market-rate units. This confirms this project's heavy reliance on market conditions. Also, 71 percent of the gross rental income is obtained from the 2-bedroom units. This is the reason for the unit distribution skewed towards the 2-bedroom units with the 2/3 and 1/3 split.

Table 5.2.3
Baseline Scenario: Rental Income

	120%		50%	
	2 BR	1 BR	2 BR	1 BR
Net SQFT	1150	950	1150	950
Number of Units	67	33	18	7
% of Total Units	54%	26%	14%	6%
Monthly Income	5,895	4,913	2,458	2,048
30% of Monthly Income	1,769	1,474	738	614
Less Utility Allowance	NA	NA	105	75
Rent Income Available	1,769	1,474	633	539
Total Annual Rent	\$1,421,874	\$583,605	\$136,620	\$45,308
Total Rent per AMI	\$2,005,479		\$181,928	
Gross Rental Income	\$2,187,407			

Net Operating Income (NOI)

The first-year NOI is approximately \$1,457,000. This is derived from the gross rental income less 5 percent vacancy and further reduced by operating expenses of \$537,500, the post-abatement real estate taxes of \$45,837, and a replacement reserve escrow deposit of \$37,500. (See the 16-year projected operation in Appendix B)

Maximum Supportable Debt

The maximum amount of debt that the above rental income from the project can support is approximately \$15,739,000. Table 5.2.4 shows how the Model has derived the loan amount using the first year NOI, a 7.625 percent interest mortgage interest rate, a 40-year loan amortization term, and 1.15 debt service coverage ratio.

Table 5.2.4
Baseline Scenario: Calculation of Debt

	Total	per unit
Gross Annual Rental Income	\$2,187,407	\$17,499
Vacancy (5%)	(109,370)	(875)
Effective Annual Rental Income	\$2,078,036	\$16,624
Annual Operating Expenses	(537,500)	(4,300)
Real Estate Taxes	(45,837)	(367)
Replacement Reserve	(37,500)	(300)
Net Operating Income	\$1,457,199	\$11,658
Debt Service Coverage Ratio	1.15	
Maximum Debt Service	\$1,267,130	10,137
Annual Debt Constant	8.0509%	
Maximum Supportable Debt	\$15,738,965	\$125,912

Capital Structure

As shown in Table 5.2.5, the first mortgage loan of \$15,738,965 (82% TDC) is subordinated by the Developer’s loan of \$810,533 (4%). The total equity raised is comprised of federal and state tax credit equity net of syndication expenses, and a one percent working capital/reserve. This “Rainy-day Fund” is created to help mitigate all parties’ financial exposure to unanticipated changes in the project’s baseline assumptions (including market fluctuations, construction delays, etc.). The project’s capital structure (as a percentage of total development cost) is, therefore, made up of 86 percent debt and 15 percent equity, inclusive of the one percent working capital/reserve.

Table 5.2.5
Baseline Scenario: Capital Structure

	Amount	% of TDC
TOTAL DEVELOPMENT COST	\$19,232,411	
DEBT		
Permanent Loan		
Tax-Exempt MHFA Bonds	\$15,738,965	82%
Subordinate Loans		
Deferred Developer Comp.	810,533	4%
TOTAL DEBT	\$16,549,497	86%
EQUITY		
Federal Tax Credits	\$1,259,852	7%
Less Load* @15%	(188,978)	
State Tax Credits	130,141	1%
Less Load* @15%	(13,014)	
Additional Value from Projected Operations	1,660,541	9%
TOTAL NET EQUITY	\$2,848,542	15%
Working Capital/Reserve	(165,628)	-1%
SURPLUS/DEFICIT	\$0	100.0%

**covers syndicator's fee, acquisition costs, legal and organizational costs, and working capital reserve*

5.3 Sensitivity Analyses

This section presents how the Model is used to measure the sensitivity of key variables. Except for a few exceptions, these are the variables that can be controlled by parties to the investment. For example, the

Developer controls the income-mix or the location of the project, while the Municipality regulates the density of the land, thereby directly impacting its cost per unit to the Developer. By sensitivity, we mean the extent to which a change in a particular variable can impact the outcome of the Model or the project's financial feasibility from the perspective of at least one party. In defining financial feasibility, we have considered the following. Returns, at or above, the baseline IRR of the investors (11.6%) and the Developer (36.8%) are regarded as desirable. Returns below what we have previously determined as "fair" in the current market (i.e. 10% for the LPs and 20% for the Developer) are deemed unacceptable by the respective parties. Returns that fall in between the minimum threshold and the baseline are regarded as feasible if they are in line with the risks of the particular project. By conducting these sensitivity analyses, it became clear that understanding the trade-offs and relationships between these variables is critical in forming a partnership that protects the interests of *all* stakeholders/investors in mixed-income housing and helps them *all* achieve their investment goals.

Relationship of Land Cost and Income-Mix

Table 5.3.1 shows the impact of varying land cost and the percentage of units set-aside for low- and low-to moderate-income households on the Developer's return and, hence, the viability of the project in that if the Developer cannot achieve a "fair" risk-adjusted return, he/she will not invest the resources necessary in the project. Note that we have assigned the responsibility to cover any capital shortages to the Developer, which results in the Limited Partners return remaining constant at 11.6 percent – our Baseline Model assumption. On the same note, if the lower land costs result in the ability to raise more capital than needed for the project, the Developer is awarded this "surplus" for locating the "under priced" land or creating value with his/her expertise.

Before we examine our findings, it is important to review how land costs of \$20,000 were reached. In our Model, the cost of land was derived based upon market data. The factors weighed when arriving at a fair price for land in a competitive market are many and include projected achievable density and market rents for that particular location. Therefore, we did not feel it was appropriate to increase/decrease land cost by more than ten percent and expect our baseline assumptions for density and market rents to remain consistent. We realize that land costs per unit can vary greatly (based on land cost and ultimate density), but had to establish and stay within certain parameters for our Model to be consistent. With this in mind, a few general observations regarding the impact of land cost and income-mix on the project feasibility, as measured by Developer's IRR, can be made.

Table 5.3.1

Impact on Developer Return when Varying Income-Mix and Land Cost
Developer assumes all surplus/deficit

		Income-Mix 80/0/20		Income-Mix 75/5/20		Income-Mix 75/0/25	
		Dev IRR	Surplus/Deficit	Dev IRR	Surplus/Deficit	Dev IRR	Surplus/Deficit
Land Cost per Unit	\$18,000	48.6%	\$240,560	28.5%	(\$235,901)	22.4%	(\$454,153)
	18,500	45.5%	180,420	26.6%	(296,042)	21.1%	(514,293)
	19,000	42.5%	120,279	24.8%	(356,182)	19.9%	(574,434)
	19,500	39.6%	60,139	23.3%	(416,323)	18.8%	(634,574)
	20,000	36.9%	0	21.9%	(476,463)	17.8%	(694,715)
	20,500	34.3%	(60,142)	20.6%	(536,604)	16.8%	(754,855)
	21,000	32.0%	(120,283)	19.5%	(596,744)	16.0%	(814,996)
	21,500	29.8%	(180,423)	18.4%	(656,885)	15.2%	(875,136)
	22,000	27.9%	(240,564)	17.5%	(717,025)	14.5%	(935,277)

A fundamental objective in mixed-income projects is to de-concentrate poverty and create a community of residents with varying incomes. Many housing experts contend that these communities are best served when the incomes are truly mixed, with gulfs between the high-income households and the lower income households minimized. In attempting to achieve this goal, however, it can be seen that even small changes in the income-mix of the project can have substantial effects on the viability of the project. The middle column of Table 5.3.1 shows the effect of shifting five percent of the units (6 apartments) originally targeted to households at 120 percent AMI to households at 80 percent AMI, thereby creating a layer of low to moderate income residents. If land cost is held constant at \$20,000 per unit, to achieve this mix, the Developer would be responsible for contributing \$476,463 to make up for the shortfall. This results in a drop in IRR to 21.9 percent - just slightly above our minimum threshold for the Developer to undertake the risk of developing this project. Even if the Developer were able to purchase the land for the equivalent of \$18,000 per unit (a 10% reduction), he/she would still have a capital shortfall of \$235,901 and a resulting IRR of 28.5 percent.

A question frequently asked regarding 80/20 Projects is why only 20 percent of the units is set-aside for low-income residents? Column three of Table 5.3.1 allows us to examine the effect of shifting five percent of the units from the market-rate households to the units set-aside for households at 50 percent AMI. This results in a project with a mix of 75/0/25. This clearly has a substantial effect on the viability of the project. At land costs of \$20,000 per unit, the Developer will need to contribute \$694,715 to fill the capital shortage and his/her resulting IRR drops to 17.8 percent – below what could be deemed as a “fair” risk-adjusted return for the Developer. The land cost per unit would have to drop to \$18,500 before a “fair” return could be realized from the project for the Developer, and to achieve this return he/she

would have to be willing to invest an additional \$514,293 of capital. This example shows just how dependent these projects are on land costs and the cross-subsidization of the market-rate units to drive the returns necessary to attract private market developers seeking a “fair” risk-adjusted return for their investment.

Relationship of Density/Land Cost and Real Estate Tax Abatement

Table 5.3.2 allows us to examine the trade-off between the Real Estate Tax Abatement required to make the project viable (as presented in our Base Scenario), and the manner in which a change in density affects the project for both the Municipality and the Developer. In order to examine this relationship, we have to make a rather broad assumption. Given that our baseline land cost per unit is \$20,000, we are assuming that the buyer agreed on this price based upon what the buyer perceived as the “attainable” density for the land. In other words, the land price already has the “attainable” density built into it. This is based upon the assumption that the 125 units we have earmarked for the project will result in a density that, generally speaking, will not impose an undue burden on the municipality and is reflective of what can be reasonably expected based upon what has transpired either in that particular Municipality, or under similar circumstances.

Table 5.3.2

Relationship between Change in Density and Real Estate Tax Abatement

Change in Density	Total Units	Land Cost per Unit	Developer IRR	Baseline Abatement	First Year Abatement
-5%	119	\$21,008	38.1%	134%	\$184,264
0%	125	20,000	36.9%	100%	137,510
5%	131	19,084	35.6%	66%	90,757
10%	138	18,116	34.9%	47%	64,630
15%	144	17,361	33.8%	16%	22,022

Note: Calculations based upon fixing total land cost at \$2,500,000 and maintaining income-mix at 80/20. Any additional real estate taxes resulting from the increase in number of units is not subject to the abatement.

With this understanding, it is now possible to explore how a change in density can impact the cost to the Municipality of the Real Estate Tax Abatement. The ability of the Municipality to weigh its options and place a value on its alternatives is key in negotiations with the Developer. For instance, if the Municipality’s main objective is to accept the baseline project and allow the total number of 125 units, the Municipality would have to offer the full abatement of the Baseline Scenario. The abatement for the first year has been noted for reference. If the Municipality would prefer to reduce the abatement required,

then accepting an increase in density of 15 percent (an additional 19 units) to the project will allow them the ability to cut the first-year abatement to \$23,002, which is equivalent to only 16 percent of the first-year baseline abatement – a first-year savings of \$115,488 to the Municipality. If the Municipality opts to reduce the density to a level 5 percent lower than the baseline, it will need to grant a greater tax concession. The 134 percent of baseline noted in the Table is in effect partial exemption from the predevelopment taxes on the property plus a full abatement from the increase in taxes due to development. It is important to note that increasing the density of the project has definite limits because the cost to construct the additional units may be more than the value created and/or there may be limitations due to site conditions or public services (i.e. – sewer). As shown, the ability to offset density with tax abatement is a very powerful tool for Cities and Towns that are considered key players in the development of mixed-income housing.

Tolerance of Key Variables

In the Table below, we have examined how the key variables in our Model would change if we were able to capture the additional value available in the project, after the LPs received a return commensurate with what the broader investment markets would typically require for an investment such as this. We previously determined this “fair” return to be a 10 percent after-tax return. We have therefore preserved the Developer’s after-tax IRR of 37 percent and constrained the investors IRR to 10 percent after-tax and brought the resulting equity into the project. The objective is to measure the tolerance of key variables while still generating a 10 percent after-tax return for the LPs.

Table 5.3.3
Capturing Risk-Adjusted Market Pricing for LP Investment

Variable	Baseline Value	Limit Value	% Change
Land Cost (per unit)	\$20,000	\$24,000	20%
Ratio of Moderate to Low-Income Units	0%	5%	-
Ratio of Low-Income Units	20%	23%	15%
Ratio of Extremely LI units (30% AMI)	0%	5%	-
Boston Area Median Income	\$65,500	\$64,000	-2%
Debt Cost	7.125%	7.975%	12%
Direct Construction Cost (per sf)	\$80	\$84	5%

We observe that the land price can go up to \$24,000/unit (a 20% increase), the ratio of low-income units can be raised by 15 percent to 23 percent of total units, or a 5 percent moderate-income tier can be included without jeopardizing the feasibility of the investment from the LPs’ perspective.

Impact of Change in Key Variables

Table 5.3.4 examines the change in the investors' and Developer's after-tax IRR associated with a 5 percent increase in key variables, assuming that the two parties will share the resulting surplus or deficit of such an increase on a 75/25 basis (investors receive 75%, Developer 25%). The Table also ranks the sensitivity of these variables.

Table 5.3.4
Impact on LPs and Developer of 5% Increase in Key Variables
75/25 share of surplus/deficit

Variables	Dev IRR	Change	Rank	Inv IRR	Change	Rank
Baseline Scenario	36.9%			11.6%		
Land Cost (\$21,000/unit)	35.3%	-1.5%	6	11.1%	-0.4%	6
DSCR (1.2)	34.8%	-2.0%	5	10.5%	-1.1%	5
125 units @ 75/25	28.9%	-7.9%	2	8.8%	-2.8%	2
125 units @ 70/5/25	32.1%	-4.8%	4	9.9%	-1.7%	4
131 units @ 80/20	36.2%	-0.7%	7	11.4%	-0.2%	7
131 units @ 75/25	27.8%	-9.1%	1	8.5%	-3.1%	1
Direct Hard Cost (\$84/sf)	31.6%	-5.2%	3	9.6%	-1.9%	3
Tax Recovery @ 55%	36.7%	-0.2%	8	11.5%	0.0%	8

As expected, increasing the ratio of low-income units by 5 percent, results in the most dramatic change. We observe that a shift from a 80/20 income mix to a 75/25 ratio of market to low-income units makes the project financially infeasible for the investors (IRR under 10%). A 5 percent increase in direct hard costs to \$84/sf also makes the investment infeasible for the LPs who would now achieve an IRR of 9.6 percent after-tax. A shift of 5 percent from the market units to the moderate-income units results in “border-line” total return for the investors. The Developer, on the other hand, given his 25 percent participation only, is less affected by a 5 percent increase, still achieving at least a 27 percent after-tax IRR across the board.

Table 5.3.5 shows the change in Developer's IRR associated with a 5 percent increase in key variables, assuming assignment of 100 percent of the surplus/deficit to the Developer.

Table 5.3.5
Impact on Developer of 5% Increase in Key Variables
Developer assumes all surplus/deficit

Variables	Dev IRR	Change	Rank
Baseline Scenario	36.9%		
Land Cost (\$21,000/unit)	32.0%	-4.9%	6
DSCR (1.2)	26.2%	-10.6%	5
125 units @ 75/25	15.4%	-21.5%	2
125 units @ 75/5/20	21.9%	-15.0%	4
131 units @ 80/20	35.0%	-1.9%	7
131 units @75/25	14.2%	-22.6%	1
Direct Hard Cost (\$84/sf)	19.9%	-16.9%	3
Tax Recovery @ 55%	36.2%	-0.7%	8

Although the order of the ranking is the same as the previous Table (the change to a higher affordable housing ratio affects the outcome the most), the impact of assigning all of the resulting surplus/deficit to the Developer increases the impact on the Developer’s IRR substantially. The scenarios in which the unit mix is changed to 75/25 now result in an IRR that is well below the Developer’s minimum threshold of 20 percent. This results in the project becoming infeasible for the Developer. The increase of \$4/sf in direct hard costs results in a “border-line” return of just under 20 percent.

Due to the principles governing the time value of money, the above Tables both show that a 5% increase in the real estate tax recovery by the city or town in year 15, has the least effect on the total return achieved by the LPs and the Developer.

Conclusion

All parties to an investment must have a reasonable expectation of receiving “fair” compensation on their investment before they will take the risk associated with that investment. Housing low-income families (the main criticism of the 80/20 program is its inability to widely serve lower-income tiers) is financially infeasible (i.e. returns that are not commensurate with the risks) because adding units that do not generate sufficient cash flow results in unacceptable returns unless the cost of producing or running these units can be offset by a reduction in land cost/unit, or in operating costs. The role of local government is, therefore, critical. Land use and zoning as well as local tax policies can offer this needed cost reductions and be key components when building a framework to help solve the problem of affordable housing in suburban areas. In fact, if adopted in tandem, they can be more effective allowing the Municipality the choice of accepting a higher density for the project, and thereby offering a lower tax abatement. But municipalities

must have sufficient incentives to adopt such programs and policies. They, too, are critical investors in the project and must be rewarded fairly.

5.4 Analysis of Risk and Return for Public & Private Parties

When organizing a partnership it is extremely important to fully understand each party's risk exposure so that a suitable reward package can be structured. In the long run, it is in each party's best interest that all parties are rewarded fairly based on the amount of their investment and the risks they are subject to. The goal is to create a partnership structure that provides sufficient incentives that each party will endeavor to see that their reward is achieved. When determining fair compensation for an investment, investors will look at the probability of whether they will actually collect their projected cash flows and secure the return available to them. In general, the higher the risk associated with collecting their project cash flows, the higher the return that will be demanded. In this section of the thesis, we will examine the various parties that form our public/private partnership. We will analyze the risks that each party bears in our Model and the returns they should be willing to accept for the risks taken.

Private Partners

In putting together an 80/20 Project, the biggest risks are in the early stages of the project. These include "controlling" the land (either by purchasing it or securing an option to purchase it) and securing the necessary permits. These risks are typically borne solely by the Developer. The Limited Partners generally do not agree to enter into the partnership until all of these obstacles have been cleared. Attaining financing commitments and securing the tax credits also holds a certain degree of risk. Finally, the financial success of the property's operations can be uncertain, but this risk can be mitigated to some degree. Below is a detailed analysis of the parties making up the private partnership portion of the project and the risks they face in the investment.

Developer

The Developer is the impetus behind the whole project. He/she begins with a vision and orchestrates the process from beginning to end. The job is inherently risky – especially during the early stages of the project when all of the risks during this phase of the development are borne by the Developer. Once the project is approved and the permanent financing has been committed, a partnership that has been formed takes control of the project. The Developer is typically the General Partner in the partnership. The partnership is legally structured so that the General Partner shoulders virtually all the risk for the

liabilities of the project and is responsible for the day-to-day operations, which generally include managing the project.

In our Model, the Developer is reimbursed for the expenses he/she incurs during the pre-development and construction phases. A portion (25%) of the Developer's overhead and the development fee is assumed to be paid upon completion of construction and the remainder is deferred, accruing interest at six percent on the unpaid balance. Interest payments on the deferred amount begin in year six and the balance of the loan is paid off in year fifteen when the property is sold. The Developer also receives 25 percent of any operational cash flows from the property plus an additional 25 percent of any net sale proceeds.

Limited Partners

The investors in the partnership are Limited Partners (LPs) and as their name implies, play a very limited role, and have limited liability for, the operations of the partnership. The LPs provide capital so the Developer will have the equity necessary to proceed with the project. In order to fully analyze the potential benefits and returns of a project such as the one we modeled, we have divided the LP interests into two categories: the "Cash Flow Benefits" which is the LPs investment returns based upon the positive cash flows of the property (including any capital gain at the time of sale); and the "Tax Based Benefits" which is derived solely from the tax benefits available from our Model. Please note that these are *not* two different entities; we are merely separating the two driving forces that provide the means for the LP to receive their returns so the risks associated with each can be clearly outlined.

Limited Partners – Cash Flow Benefits

The risks associated with the Cash Flow Benefits (CFB) are somewhere between those faced by the Developer and those associated with receiving the Tax Based Benefits. CFBs only receive a return on investment if the property is able to generate a positive cash flow. Our Model shows positive cash flow from operations each year. The structure of our partnership is such that these LPs will receive 75 percent of this cash flow stream. This cash flow stream is by no means guaranteed, but the assumptions we have used in our model were done in a conservative manner and the structure of our debt is such that the risk of not receiving their intended return is low to moderate. CFBs also incorporate the tax cost of 75 percent of any capital gain at the time of sale.

Limited Partners – Tax Based Benefits

The substantial motive for the LPs to invest in real estate is to receive the considerable tax benefits generated by real estate investments – especially if LIHTC are available. In our 80/20 project, the tax

benefits include LIHTCs along with the “tax losses” that are generated by the property. Unlike the CFBs, which are uncertain, the TBBs are highly probable and, barring a foreclosure within the first 15 years of operations, carry very little risk.

Public Partners

State

One of the responsibilities of the State Government is to provide for the welfare of their constituents. The dynamics of the private market generally results in supply meeting demand, but the State needs to supply incentives for the construction of affordable housing due to it being otherwise economically unfeasible. Generally speaking, Municipalities are slow to meet the need of affordable housing in their own communities. This can be for a variety of reasons including the cost to the Municipality (households in affordable units require the same public services but affordable units generate lower tax revenues) and the stigma attached to affordable housing leading many residents to encourage their local government to take a “Not In My Back Yard” approach to the issue. Therefore, the State needs to provide strong incentives, or carry a big stick, to persuade Municipalities to provide their fair share of the affordable housing needs. A stick the Commonwealth of Massachusetts can wield is the legal power afforded them through Chapter 40B, which requires that the affordable housing units in a municipality be equal to ten percent or more of the overall housing stock.

In order to make the partnership more attractive to the Municipality and to help spur construction of affordable housing, we are proposing two incentives aimed directly at the Municipality. First, the State would annually reimburse the Municipality for a portion (75%) of the annual real estate tax abatement that, when combined with the 50 percent repayment of the full amount of the tax abatement due to the Municipality from the sale of the project, will effectively equal a 9 percent return to the Municipality over the fifteen year period. In order for the Municipality to have unrestricted use of such tax abatement repayment, the number of affordable units located in the Municipality must have reached the 10 percent quota as mandated by Chapter 40B by the time of sale. If the 10 percent quota has not been achieved by the time of sale, the Municipality must contribute the 50 percent tax abatement repayment to an Affordable Housing Trust Fund they control that is dedicated to the development of additional affordable housing within the Municipality.

A second incentive is to offer bonuses to any Municipality that offers a real estate tax abatement such as the one outlined in our Model that results in the construction of affordable housing over the next five

years. Three different bonuses will be offered: “Scattered-Site”; “Increased Affordability”; and “Priority-Need”. These bonuses will allow Municipalities the opportunity to gain additional credits above and beyond the actual number of affordable units constructed, thereby allowing them to reach the Chapter 40B mandate more quickly, and with fewer affordable units, than what would be normally required under the mandate. This will provide a substantial incentive to Municipalities that actively endeavor to provide affordable housing in their jurisdiction. After five years, the State would reserve the option to review these policies and adjust them accordingly.

We judge the risks associated with these policies to be quite low. The incentives offered are just that – incentives, not threats – although the power of Chapter 40B looms in the background. There may be some policy risk in that the bonuses toward the mandate of Chapter 40B and there is a financial cost³ to the State, but if this “jump starts” the production of affordable housing, the overall political reaction should be favorable.

MHFA

MHFA raises capital for 80/20 projects by issuing tax-exempt bonds. Since the bonds are tax-exempt, bondholders are willing to pay MHFA a premium (accept a lower yield) over comparable bonds that are taxable. MHFA can then afford to offer debt that has a lower interest rate than the market. This is how the Developer is able to attain debt from MHFA at below market cost. If MHFA is to maintain its ability to offer financing to low-income housing developments, it is crucial that they receive the debt service owed to them. If defaults occur, MHFA would not be able to make the payments to their bondholders, reducing their credit rating in the short run and possibly placing the entire financial soundness of the Agency at risk. The debt payments to MHFA must be able to be met with a high degree of certainty for the Agency to be willing to invest. Their risk tolerance is quite low. MHFA is a first mortgage on the property and will be first in line to receive any sale proceeds to pay off the outstanding loan balance.

Municipality

Our Model calls for a tax abatement by the Municipality that gradually declines (the amount of the abatement is reduced thereby increasing the amount of real estate taxes paid) over the life of the project. The Municipality will receive from the property a base amount of property taxes each year equal to the tax levy of the parcel prior to development and the State will reimburse the Municipality for a portion of the abatement. At the time of the sale, the Municipality will be paid 50 percent of the abatement (for

³ Model estimates a total of \$1.54 million in total state reimbursement of real estate tax abatement to the Municipality over 15 years for 25 low-income units. This is equal to \$342/month/low-income unit.

details, see above under State). The Municipality's claim on the proceeds of the sale is in second position behind that of MHFA. The reimbursement from the State for a portion of the abatement holds little risk, and although the recapture of the abatement is uncertain, the Municipality stands to recapture a higher amount of taxes than the net amount they abated due to the partial reimbursement from the State.

5.4.1 Assessments of Investment Risk

In order to assess the risks each party to the project is exposed to, we have broken the analysis into the various "project phases" or "investment objectives" that occur over the span of the project. The degree of risk is rated and a brief description of each phase or investment is given.

Project Phase: Pre-development and Entitlement

Degree of Risk: High

Parties Bearing Risk: Developer

Notes: During pre-development, the Developer begins to have cash outlays along with the time he/she has invested in the project. Activities include securing the land (generally through an option or purchase), preliminary design and site analysis. This is all done prior to actual entitlement. Land purchased to fit the requirements of our Model rarely allows enough units to be built "as of right". The Developer has to go before a number of agencies and boards to attain the required variances and approvals. MHFA has the power to grant Comprehensive Permit (Chapter 40B) site approvals, which reduces this risk substantially, but lawsuits to halt the development are always a threat. Much of the costs incurred and value of the Developer's time are lost if the project does not gain approval.

Project Phase: Financing

Degree of Risk: Moderate

Parties Bearing Risk: Developer

Notes: Whether financing can be secured will depend largely on how the lender perceives the risk of the project. The experience of the Developer in 80/20 development will be weighed along with the financial projections for the project.

Project Phase: Federal Tax Credit Allocation

Degree of Risk: Very Low

Parties Bearing Risk: Limited Partners – Tax Based Benefits

Notes: The LPs do not enter into the partnership until after the credits have been successfully allocated to the project by the appropriate tax credit allocation agency. However, if tax-exempt financing is used as assumed in our Model, then the credits (4%) are automatically allocated to the partnership. Upon completion of the project, tax credits are allowed to be taken once the unit is actually occupied by a household that fits HUD’s parameters for “Very Low-Income”. The credits are a guaranteed dollar-for-dollar reduction of federal taxes. Therefore, as long as the LPs have a federal tax liability, the credits will be worth their full value. The only risk facing the LP is if the property falls out of compliance (the units set aside for very low-income households are not rented to households that fit the HUD parameters). If non-compliance occurs, a portion of the taxes saved will be “recaptured” and repaid to the government by the LPs. Provided management is experienced and competent, non-compliance is rarely an issue. Therefore, the risk of not receiving the full tax benefits offered by LIHTC is very low.

Project Phase: Construction

Degree of Risk: Moderate

Parties Bearing Risk: Developer

Notes: Construction overruns could be a risk but our Model budgets for both higher construction costs and construction contingency than were actually incurred by the developments we analyzed. If there are overruns, the Developer will be responsible for the extra costs which ultimately may be added to the project’s total development costs. An experienced developer should be able to bring construction costs within our contingency allowances. Negotiations will be held to try and extend the financing to cover these costs. In order to avoid the risk of cost overruns during construction, LPs often structure their agreement so that capital is contributed after construction is complete.

Project Phase: Rent-Up

Degree of Risk: Moderate

Parties Bearing Risk: Developer and Limited Partners – Cash Flow Benefits

Notes: The low-income units typically rent-up very quickly, so the real risk is renting the market-rate units at pro forma rents. How quickly the property rents-up will depend on several factors: the appeal of the project and unit design to potential renters, the current demand for rental units, and the marketing expertise of the management company. The design and marketing factors can be controlled but the market cannot. Proper forecasting techniques can mitigate the risk to some degree, but many unforeseen factors can influence the market demand. The longer the project takes to reach 95 percent occupancy (5 percent vacancy was built in to the forecast), the less positive cash flow there will be. The Tax Based

Benefit return is independent of the cash flows of the project so they have no risk from this phase unless there is a default and foreclosure within the first 15 years of project operations.

Project Phase: Operations

Degree of Risk: Low to Moderate

Parties Bearing Risk: Developer and Limited Partners – Cash Flow Benefits

Notes: Once the property has achieved full occupancy and has been in operation for a couple of years (often referred to as being “stabilized”), the risk of failure is relatively low provided management is experienced as well as competent and the real estate market follows historical trends. Our Model allows for 5 percent vacancy even though the SHARP data shows mixed-income properties often experience vacancy rates slightly below this level. The Model also uses growth rates for gross rents, operating expenses and real estate taxes from the SHARP data which subjects the Model’s pro forma to the stress of a substantial downturn in the economy. Therefore, the risks associated with not achieving the cash flows we have forecast should be considered low to moderate.

Investment Objective: Tax Loss Benefits

Degree of Risk: Low

Parties Bearing Risk: Limited Partners – Tax Based Benefits

Notes: One of the primary reasons real estate is attractive to investors is the ability to “write off” against otherwise taxable income, the depreciation allowance along with interest paid on mortgage notes. It is important to note that these losses are not indicative of the actual operating performance of the property. These “paper losses” are allowed regardless of how the property performs and can be taken for our entire 15-year holding period as long as the property remains a viable operation (i.e. the property can continue to pay the annual debt service and pay the real estate taxes and operating expenses incurred). The risk that these “paper losses” and corresponding tax benefits may not be realized is, arguably, quite low. The property would have to become financially distressed and be foreclosed upon for the tax benefits to be at risk. If this occurred, a portion of the tax credits previously taken would be subject to the risk of recapture. In our Model, the fact that the debt service coverage ratio on the first mortgage is 1.15 helps insure that sufficient cash flow will be available to pay operating expenses and the debt service on the first mortgage. The note to the Developer for the deferred development fee has no payments due for the first five years which should give the property time to become stabilized and rents should have grown by that point to easily absorb this additional debt. We further assume that the Developer note and mortgage provides for no foreclosure remedy. The real estate tax abatement also helps ease any unforeseen cash flow difficulties. There is also the slight risk that Congress could change the tax laws thereby altering the

amount of losses that can be taken, although this would represent a systematic, as opposed to project based, risk.

Investment Objective: Repayment of First Mortgage

Degree of Risk: Low

Parties Bearing Risk: MHFA

Notes: In our Model, we have taken a conservative approach to estimate Net Operating Income (NOI is the cash available for debt service) and have grown rents and expenses based upon the parameters we derived from the SHARP data. In addition, the terms of the deferred note to the Developer and the tax abatement over the first 5 to 10 years, respectively, should help ease any unforeseen financial stresses on the property. Finally, we have also calculated the amount of money that MHFA will lend to the project based on a Debt Service Coverage Ratio (DSCR) of 1.15. Adherence to these conservative structural features should result in a low amount of risk to MHFA enabling the Agency to receive full and timely repayment of their loan on the project. The loan received from the MHFA is a first mortgage. If default does occur, they will have a first claim on the property.

Investment Objective: Tax Abatement Repayment

Degree of Risk: Moderate

Parties Bearing Risk: Municipality

Notes: Whether the Municipality receives full repayment of the taxes committed to them is largely dependent on how much NOI increases prior to the time of disposition. The assumptions we have used which result in our NOI forecasts are conservative and our opinion is that the expected residual value should be attained. The Municipality is the second mortgagee on the property. If default occurs, they will stand second behind the MHFA for any proceeds from foreclosure.

Investment Objective: Deferred Development Fee

Degree of Risk: Moderate

Parties Bearing Risk: Developer

Notes: The Developer is third in line at the time of sale for receiving his deferred development fee. The risks the Developer faces on whether or not the fee will be received is the same as the Municipality's Tax Abatement Recapture with the added risk of having to fulfill the obligations to MHFA and the Municipality before receiving the deferred fee.

Investment Objective: Sale Proceeds

Degree of Risk: Moderate

Parties Bearing Risk: Developer & Limited Partners – Cash Flow Benefits

Notes: The Developer and LP stand fourth in line before they will receive any proceeds from the sale of the property. The first mortgagee (MHFA), the second mortgagee (the Municipality) and the Developer’s deferred development fee will be paid in full before any proceeds are received. Whether the property appreciates over the fifteen years is largely dependent on the economy, real estate market, and condition of the property at the time of sale. The twenty percent set-aside units are required to remain affordable for 30 years, therefore the sales price at Year 15 will be lower than if the property was allowed to convert to 100 percent market rate. Note that the prospect for converting the development to 100 percent market rate after 30 years will provide a significant upward pricing difference from the perspective of a buyer of the property in Year 15, or thereafter.

Table 5.4.1

Private Parties’ Risk Assessment by Project Phase & Investment Objective

Project Phase	Degree of Risk	Parties Bearing Risk
Pre-development and Entitlement	High	Developer
Financing	Moderate	Developer
Construction	Moderate	Developer
Rent-Up	Moderate	Developer and LPCFB
Operations	Low to Moderate	Developer and LPCFB

Investment Objective	Degree of Risk	Parties Bearing Risk
Tax Credit Allocation	Very Low	Developer
Tax Loss Benefits	Low	LPTBB
Repayment of First Mortgage	Low	MHFA
Tax Abatement Repayment	Low to Moderate	Municipality
Deferred Development Fee	Moderate	Developer
Gain on Sale	Moderate	Developer and LPCFB

5.4.2 Returns Commensurate with Risks

Real estate development is often regarded as being a relatively risky investment, which for the most part is true. But, as we just pointed out, *investing* in real estate projects does not necessarily have to be a risky venture. Real estate investments can be structured so that the risks are carved out in “layers”. Each “layer” represents a different degree of risk and can be allocated to the investor which has the investment profile that meets that level of risk. When structured properly, parties willing to shoulder more risk will have the potential to receive higher returns reflective of that degree of risk. Parties seeking a lower degree of risk and a more assured return, should only receive returns reflective of that risk profile. Legally and practically this can be arranged through a partnership arrangement. Parties will be agreeable to entering into the partnership provided they feel they are being properly rewarded for the risks they are bearing. This brings us to the question of what returns should the various parties in our Model be willing to accept for the risk exposure associated with their investment in our partnership? In determining if the returns are commensurate with the risks taken by the parties in the partnership, we need to find suitable risk/return comparisons for each party.

Developer

We have seen that the Developer shoulders virtually all of the risk during the early stages of the project and that the degree of risk is substantial. Moreover, 75 percent of the development fee and overhead are deferred. This deferred compensation is only received if the property remains sound and appreciates in value as forecasted. This is also true of his claim on 25 percent of the cash flow and 25 percent of the capital appreciation. Therefore the majority of the Developer’s return is based upon the performance of the property and subject to the risks of the market. Having the majority of the Developer’s compensation being received at the “backend” of the deal provides a strong incentive for him/her to conduct the development and operation of the property in an efficient and effective manner.

The appropriate return for the Developer is difficult to assign an absolute number to in that he/she bears virtually all of the risk in the project and the degree of risk can vary significantly from project to project. In our Model, the compound annual average return the Developer earns is 36.8 percent, after-taxes (equivalent to approximately 50% before taxes assuming a 27% marginal effective tax rate). (see Table 5.4.2.1). Each development will come with its own particular risks and the risk during the early phases can be substantial. We view 36.8 percent as a “fair” return for our Model Project, but there will be projects in which this return may be unnecessarily considered high on a risk-adjusted basis. If some of the risks during the early stages of the project can be diminished, we have seen comparable real estate

investments offering after-tax returns ranging from 15 percent to 30 percent.⁴ With the ability of MHFA to grant Comprehensive Permit (Chapter 40B) Site Approvals for 80/20 projects, this helps mitigate many of the pre-developments risk and may warrant compound average annual after-tax returns between 20-30 percent. We have therefore established a rather wide range for the Developer’s return with a floor of 20 percent and a ceiling of 37 percent. Returns below this floor will not provide the financial incentive for the Developer to undertake a project of this type and a return above 37 percent is considered excessive.

Table 5.4.2.1
Developer’s Investment Analysis

Year	(1) Initial Investment Outlay*	(2) Before Tax Cash Flow @ 25%	(3) Taxable (Loss)/ Income	(4) Tax (Loss)/ Income -(3)*(0.35)	(5) After Tax Cash Flow (2)+(4)	(6) Net Cash From Sale @ 25%	(7) Reimb. of Upfront Investment Outlay	(8) Current Portion of Developer’s Fee	(9) Net After Tax Investment Flow (1)+(5)+(6)+(7)+ (8)
0	(167,429)							0	(167,429)
1	(167,429)							0	(167,429)
2	(167,429)							0	(167,429)
3							502,286	270,178	772,464
4		47,517	(3,138)	1,098	48,616			0	48,616
5		50,149	(2,971)	1,040	51,189			0	51,189
6		39,982	(3,311)	1,159	41,141			0	41,141
7		38,296	(3,307)	1,158	39,454			0	39,454
8		49,446	(2,785)	975	50,421			0	50,421
9		49,096	(2,718)	951	50,047			65,081	115,128
10		58,378	(2,260)	791	59,169			65,081	124,250
11		80,429	(1,285)	450	80,879			65,081	145,959
12		123,746	547	(191)	123,554			65,081	188,635
13		139,541	1,285	(450)	139,091			65,081	204,172
14		137,981	1,336	(468)	137,514			65,081	202,594
15		120,350	753	(264)	120,087			65,081	185,167
16		112,381	564	(198)	112,184			65,081	177,264
17		120,714	1,037	(363)	120,351			65,081	185,432
18		134,557	1,740	(609)	133,947	903,961		1,149,756	2,187,664
	(\$502,286)	\$1,302,564	(\$14,512)	\$5,079	\$1,307,643	\$903,961	\$502,286	\$2,005,658	\$4,217,262

* Assumes land option cost of 3% of land price per year for three years prior to construction plus 15% of total soft cost over three years

IRR **36.87%**
NPV @ 20% **\$278,762**

Limited Partners – Cash Flow Benefits

The return that the cash flow benefits portion of the LP investment (75% of both after-tax cash flow and appreciation on the property) is subject to the same uncertainty and risks as the Developer bears on his portion of the after-tax cash flow and appreciation. However, the LPs do not bear the pre-development risk that the Developer does. Therefore, their return expectations should be adjusted downward accordingly.

⁴ These returns are comparable to Opportunity Funds that invest in “risky” real estate ventures including development. As reported in an article in the Pension Real Estate Association (PREA) Quarterly, Spring 2000, “Opportunity Funds: The Convergence of Real Estate and Private Equity”, investors in Opportunity Funds typically seek long-term net private equity returns of 20-30 percent.

Finance theory instructs us that returns on investments can be thought of as being composed of two components: the risk-free rate and a risk premium. Treasury Bills are often regarded as being risk-free since the U.S. Government backs them and the return of the investment is guaranteed. Currently, 15-Year Treasury Bills are yielding approximately 5.75 percent⁵. A reasonable approach to determining a fair return for the cash flow benefits (CFB) is for the LPs to receive a return that is 5.75 percent plus a premium for the risk of the investment. Based upon our analysis, it is safe to say the risk exposure of the LPs' investment to receive the CFB is certainly lower than if it were invested in the stock market. In fact, total returns (the combined return for tax benefits *and* cash flow) for real estate investments are often regarded to be approximately one-half as risky as investing in the stock market⁶. Since we are presently concentrating solely on the CFB portion of the investment, which is the riskier component of total return, we will assume it carries three-quarters the risk as the stock market. The S&P's average return over the past 10 years (of a "bull" market, nonetheless) has been 18.2 percent⁷, which results in a risk premium of approximately 12.5 percent (18.2% less 5.75%). Therefore, the LPs should be willing to accept a pre-tax return in the vicinity of 15.1 percent on their investment (5.75% plus three-quarters of 12.5%). This equates to an after-tax return of approximately 9.8 percent (15.1% x (1-0.35)).

Table 5.4.2.2

LPs Cash Flow Benefits-Calculation of Net Sale Proceeds

Sale Price @ 9.5% Capitalization Rate		\$19,971,128
Cost of Sale at 2%		<u>(399,423)</u>
Net Sale Price		\$19,571,705
Total Development Cost	\$19,232,411	
Capital Expenditures	697,459	
Tax Depreciation*	<u>0</u>	
Adjusted Tax Basis	19,929,870	\$19,929,870
Capital Gains		<u>(358,165)</u>
Tax Liability @ 35%		\$125,358
Net Sale Price		\$19,571,705
Capital Gains Taxes		125,358
Outstanding Mortgage		(13,971,108)
Outstanding Developer's Fee		(1,084,675)
Real Estate Tax Recovery @ 50%		<u>(1,025,435)</u>
Net Cash Proceeds from Sale		\$3,615,844
<i>* Deducted as part of the tax credit investment analysis</i>		

⁵ Wall Street Journal, August 18, 2000, Section C, p. 18.

⁶ Based on the Capital Asset Pricing Model (CAPM): The expected risk premium of an investment = β multiplied by the expected risk premium of the market [$r_a - r_f = \beta(r_m - r_f)$]. The Beta for real estate is widely regarded to be 0.5 due to the low correlation of real estate with other investment classes.

⁷ Information obtained from documents distributed during Pension Real Estate Association (PREA) Conference at the Massachusetts Institute of Technology, Center for Real Estate, June 2000.

For our Model we have rounded this required return up to 10 percent and based the equity contribution (\$1,660,000) for the “Added Value” on an IRR of 10 percent. (See Tables 5.4.2.2 and 5.4.2.3)

Table 5.4.2.3
LPs Investment Analysis-Cash Flow/Appreciation

Year	(1) Capital	(2) Before Tax Cash Flow @75%	(3) Taxable Income*	(4) Tax savings (Liability) -(3)*(0.35)	(5) After Tax Cash Flow (2)+(4)	(6) Net Proceeds from Sale @ 75%	(7) Total Investment Flow (1)+(5)+(6)
0	(1,660,541)						(1,660,541)
1		142,552	142,552	(49,893)	92,659		92,659
2		150,448	150,448	(52,657)	92,659		92,659
3		119,946	119,946	(41,981)	97,791		97,791
4		114,889	114,889	(40,211)	77,965		77,965
5		148,338	148,338	(51,918)	74,678		74,678
6		147,288	147,288	(51,551)	96,419		96,419
7		175,134	175,134	(61,297)	95,737		95,737
8		241,287	241,287	(84,450)	113,837		113,837
9		371,237	371,237	(129,933)	156,837		156,837
10		418,623	418,623	(146,518)	241,304		241,304
11		413,944	413,944	(144,881)	272,105		272,105
12		361,051	361,051	(126,368)	269,064		269,064
13		337,143	337,143	(118,000)	234,683		234,683
14		362,143	362,143	(126,750)	219,143		219,143
15		403,670	403,670	(141,284)	235,393		235,393
16		423,785	423,785	(148,325)	262,385	2,711,883	2,974,268
	(\$1,660,541)	\$4,331,478	\$4,331,478	(\$1,516,017)	\$2,632,659	\$2,711,883	\$3,684,001

IRR 10%

* Before tax cash flow is all taxable because tax deductions are already taken into consideration as part of the breakeven tax credit investment analysis

Limited Partners – Tax Based Benefits

For the tax-based benefits (TBB) component of the LP investment, in which we only included the equity raised from selling the federal tax credits, our analysis has shown that such benefits are exposed to very limited risk. In fact, it would be hard to argue that such projected benefits should require much more of a return that perhaps a 100-150 basis points over a 15-Year Treasury Bill (the yield spread applicable to an “A” credit). For the sake of consistency, however, we will determine the return based upon same process as we used for the CFB. We will assign these projected benefits a very generous risk premium equal to one half that of the S&P premium – 6.25 percent (12.5% x 0.5). When added to the risk-free rate of 5.75

percent, the result is a pre-tax return of 12.0 percent (5.75% + 6.25%). This equates to an after-tax return of 7.8 percent (12.0% x (1-0.35)).

For our Model, we spoke to syndicators of LIHTCs to ascertain what the market was currently willing to pay for the benefits in a tax-credit investment such as the one we modeled. Projects with LIHTCs have generally received a net investment between \$0.78 and \$0.82⁸ for each dollar of tax credit available. Based upon this information, we used the figure of \$0.80 as the amount our project could expect to receive from investors for the available LIHTCs. These deals are structured so that investors receive all the tax benefits, not just the LIHTCs; but the industry quotes the price based upon net equity invested in the project divided by the tax credits available. Another party to these investments is often a syndicator who brings the investor and Developer together. The “load” that the syndicator charges is approximately 15 percent, which is paid by the investors, and when added to the net price paid for the tax credits, represents the gross price paid for the tax credits, or their total investment in the project for the TBB.

Table 5.4.2.4
Federal Low Income Tax Credit Calculation

Gross Price/Credit	0.94
Total Cost to the Investors	\$1,259,852
Load @ 15%	(\$188,978)
Net Equity to the Project	\$1,070,874
<hr/>	
Total Development Costs	\$19,232,411
Land Costs	(\$2,500,000)
Total Eligible Basis	\$16,732,411
Percentage Low Income	20%
Qualified Basis	3,346,482
Tax Credit Rate	4%
Max Annual Tax Credit	\$133,859

Our risk-adjusted analysis indicates that for the TBB, the LPs should be willing to accept an after-tax return of 7.8 percent. With this in mind, we calculated the return our project would give to investors if they paid the market rate of \$0.80 for the LIHTCs. Our analysis using our Model 80/20 Project shows that the *federal* tax benefits alone (excluding cash distribution of any type and assuming foreclosure in Year 15) generate an after-tax return of 14 percent. Based upon the risks involved in this Model 80/20 project, we assigned an after-tax return of 10 percent to the TBB which seems more than fair based on the

⁸ Armando Perez, Lend Lease Real Estate Investment, personal interview, July 19, 2000

limited risks associated with receiving these “statutory” benefits. At a 10 percent after-tax return, a NPV analysis shows that there is an investment value surplus of \$171,025, net of the applicable syndication “load” (See Table 5.4.2.6). This appears to indicate that at the market price of \$0.80 per credit, investors are still requiring to be paid a substantial risk premium for perceived risks that are arguably difficult to identify.

History has shown us that the amount investors are willing to pay for LIHTCs has risen over time. This has been attributed to the market becoming more efficient and the perceived risks of investing in tax-credit projects diminishing over time as investors became more comfortable with the risks associated with this type of investment.

Table 5.4.2.5
Tax Capital Accounting

Capital Contribution	\$1,259,852
Cum. Allocations of Taxable Income (Loss)	(6,662,287)
Cumulative Cash Distribution	0
Ending Tax Capital Account	(\$5,402,435)
Gain on Sale	5,402,434
Tax Savings (Liability) on Sale	(\$1,890,852)

Table 5.4.2.6
LPs Federal Tax Credit Investment Analysis

Year	Capital Contrib.	Federal Low Income Tax Credit	Taxable Income (Loss) from Operations *	Tax Savings (Liability) from Operations - (3)x0.35	Tax Savings (Liability) from Sale	Total Tax Savings (Liability) (4)+(5)	Cash Distrib.	Net After Tax Investment Flows (1)+(6)+(7)
0	(1,259,852)	0	0	0	0	0	0	(1,259,852)
1		0	0	0	0	0	0	0
2		133,859	(498,878)	174,607	174,607	174,607	0	308,467
3		133,859	(494,494)	173,073	173,073	173,073	0	306,932
4		133,859	(486,390)	170,237	170,237	170,237	0	304,096
5		133,859	(480,189)	168,066	168,066	168,066	0	301,925
6		133,859	(472,094)	165,233	165,233	165,233	0	299,092
7		133,859	(466,286)	163,200	163,200	163,200	0	297,059
8		133,859	(457,727)	160,204	160,204	160,204	0	294,064
9		133,859	(450,685)	157,740	157,740	157,740	0	291,599
10		133,859	(444,027)	155,410	155,410	155,410	0	289,269
11		133,859	(431,147)	150,902	150,902	150,902	0	284,761
12			(422,120)	147,742	147,742	147,742	0	147,742
13			(408,516)	142,981	142,981	142,981	0	142,981
14			(396,770)	138,869	138,869	138,869	0	138,869
15			(382,495)	133,873	133,873	133,873	0	133,873
16			(370,469)	129,664	(1,890,852)	(1,761,188)	0	(1,761,188)
	(\$1,259,852)	\$1,338,593	(\$6,662,287)	\$2,331,800	(\$1,890,852)	\$440,949	\$0	\$519,689

* Assumes breakeven operations (i.e. NOI=annual hard debt service obligations associated with MHFA and Developer loans)

IRR	14%
NPV @ 10%	\$171,025

For instance, in the years immediately following the enactment of the Tax Act of 1986 when LIHTCs were created, investors were only willing to pay slightly over \$0.50 for the credits. This has gradually increased over time to reach the \$0.80 average we have today. If the historical performance of these 80/20 projects continues to show very little risk for the returns offered, as we believe they will, the amount investors should be willing to pay for these credits should rise (and their return expectation decrease) to bring them into line with other investments of similar risk. Our Model indicates that the market should recognize that these LIHTCs are still not fully valued. In fact, our analysis indicates that existing investors may be earning after-tax returns that are approximately double what they should be.

As there is no market for state tax credits yet, we have used the same logic and parameters as the federal tax credits to calculate the LPs return and the net equity raised from the state tax credits. The following Tables present the Model's results.

Table 5.4.2.7
State Tax Credit Calculation

Gross Price/Credit	0.39
Total Cost to the Investors	\$130,141
Load @ 15%	(\$13,014)
Net Equity to the Project	\$117,127
<hr/>	
Annual Federal Tax Credit	\$133,859
Maximum Annual Tax Credit @ 50% Fe	\$66,930

Table 5.4.2.8
LPs State Tax Credit Investment Analysis

Year	(1) Capital Contribution	(2) State Low Income Tax Credit	(3) Additional Federal Taxable Income Assoc. w/ SLIHTC	(4) Tax Savings (Liability) from Federal Taxation of SLIHTC - (3)x 0.35	(5) Net After Tax Investment Flows (1)+ (2)+(4)
0	(\$130,141)	0	0	0	(\$130,141)
1		0	0	0	0
2		66,930	66,930	(23,425)	43,504
3		66,930	66,930	(23,425)	43,504
4		66,930	66,930	(23,425)	43,504
5		66,930	66,930	(23,425)	43,504
6		66,930	66,930	(23,425)	43,504
	(\$130,141)	\$334,648	\$334,648	(\$117,127)	\$87,380
			IRR		14%
			NPV @ 10%		\$17,984

Limited Partners – Total Return

As previously mentioned, when returns from real estate are typically measured, the CFB and the TBB are not separated, but are calculated together to determine the total expected return to the LPs. To complete our analysis of the LPs investment, we will look now at the total return on total capital invested by the LPs to verify our framework. Our analysis indicates a total after-tax return on the total capital investment of \$3,050,000 by the LPs to be 11.6 percent (See Table 5.4.2.10).

A fair risk-adjusted return for the LPs should follow the same logic used in our determination of the TBB when we assigned a risk premium equivalent to one-half that of the S&P. Interestingly, our resulting risk-adjusted after-tax return of 8 percent is substantiated by the NACREIF performance benchmark of 8 percent⁹. Nonetheless, our final calculation was to allow the LPs a generous total after-tax return of 10 percent (with an NPV of \$310,515), indicating that the returns of the LPs are indeed higher than would be justified when compared to investments of similar risk.

Table 5.4.2.9
Calculation of Sale Proceeds for Aggregate LP Investment

Sale Price @ 9.5% Capitalization Rate		\$19,971,128
Cost of Sale at 2%		(399,423)
Net Sale Price		19,571,705
Total Development Cost	\$19,232,411	
Capital Expenditures	697,459	
Tax Depreciation	(9,126,770)	
Adjusted Tax Basis	10,803,101	\$10,803,101
Capital Gains on Sale		8,768,605
Tax Liability @ 35%		(3,069,012)
Net Sale Price		\$19,571,705
Capital Gains Taxes		(3,069,012)
Outstanding Mortgage		(13,971,108)
Outstanding Developer's Fee		(1,084,675)
Real Estate Tax Recovery @ 50%		(1,025,435)
Net Cash Proceeds from Sale		\$421,474

⁹ Information obtained from documents distributed during PREA (Pension Real Estate Association) Conference at Massachusetts Institute of Technology, Center for Real Estate, June 2000

Table 5.4.2.10
LPs Aggregate (Tax Credit and Cash Flow) Investment Analysis

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Total Investment	Before Tax Cash Flow @ 75%	Taxable Income (Loss)	Additional Federal Taxable Income Assoc w/ SLIHTC	Net Taxable Income (Loss) from Operations (3)+(4)	Tax Saving (Liability) from Operation (5)x(0.35)	After-Tax Cash Flow from Operations @ 75% (2)+(6)	Federal Low Income Tax Credit	State Low Income Tax Credit	Cash Dist. from Sale @ 75%	Net After Tax Invest. Flows (1)+(7)+(8)+(9)+(10)
(3,050,534)	0	0	0	0	0	0	0	0		(3,050,534)
	0	0	0	0	0	0	0	0		0
	190,069	(310,709)	66,930	(243,780)	85,323	275,392	133,859	66,930		476,181
	200,597	(294,113)	66,930	(227,183)	79,514	280,111	133,859	66,930		480,900
	159,928	(327,782)	66,930	(260,853)	91,298	251,226	133,859	66,930		452,015
	153,185	(327,415)	66,930	(260,485)	91,170	244,355	133,859	66,930		445,144
	197,784	(275,737)	66,930	(208,808)	73,083	270,866	133,859	66,930		471,655
	196,384	(269,080)		(269,080)	94,178	290,562	133,859			424,421
	233,513	(223,724)		(223,724)	78,304	311,816	133,859			445,675
	321,716	(127,209)		(127,209)	44,523	366,239	133,859			500,099
	494,983	54,159		54,159	(18,956)	476,028	133,859			609,887
	558,164	127,228		127,228	(44,530)	513,634	133,859			647,494
	551,926	132,309		132,309	(46,308)	505,618				505,618
	481,401	74,537		74,537	(26,088)	455,313				455,313
	449,525	55,877		55,877	(19,557)	429,968				429,968
	482,857	102,686		102,686	(35,940)	446,917				446,917
	538,226	172,290		172,290	(60,302)	477,925			316,106	794,030
(\$3,050,534)	\$5,210,257	(\$1,436,685)	\$334,648	(\$1,102,037)	\$502,840	\$5,713,097	\$1,338,593	\$334,648	\$316,106	\$4,534,783
									IRR	11.6%

State

In attempting to measure the risks and returns for the State, we run into the difficulty of measuring what could be regarded as a “moral obligation” to provide incentives to help produce affordable housing. They also have the responsibility to do this in a cost effective manner. The framework of our Model allows the State to provide incentives to the private market and to the Municipality to encourage production of affordable units. The risk is minimal in that the reimbursement to the Municipality for a portion of the tax abatement is a pre-determined amount. The Developer must make the property succeed to earn his compensation and there is no provision for the State to make up any investment benefit deficits as many other housing programs have historically called for.

MHFA

Determining the returns that MHFA should receive for its position in the project requires a different approach than that of the investors and Developer. MHFA raises its capital by issuing tax-exempt bonds and the resulting interest rate the Agency receives is dependent on interest rates in the taxable and tax-exempt markets for bonds at the time of issuance. It is also MHFA’s mission as a quasi-public agency to provide financing for low-income housing projects. Therefore, it aims to provide capital as inexpensively as possible to make these projects feasible, but has constraints due to being self-funding. In other words,

MHFA has to act as a responsible lender and must make sure it is able to cover its debts to its bondholders from the repayments on loans it makes. The interest rate we used was based upon MHFA's current loan rates. The DSCR in our Model is 1.15 (which is slightly higher than the 1.1 minimum amount MHFA allows) and the assumptions used for our pro forma are generally conservative. In summary, the interest rates on the loan are market driven and the risks of our Model fall within the parameters of MHFA's underwriting guidelines, so MHFA's risk and return appear to be well aligned.

Municipality

The Municipality certainly plays a critical role in providing housing for its residents that fall under the guidelines of low-income. As previously mentioned, these households often include teachers, policeman and other employees of the Municipality. Like all government agencies, the Municipality wishes to maximize the value of its tax dollars. Mixed-income housing offers the Municipality an opportunity to provide low-income housing in a cost efficient manner. Our Model is structured so that the Municipality's real estate abatement helps reduce operating costs and, therefore, allows more debt to be raised to finance the project.

Through our proposed partnership with the State, the Municipality has the opportunity to effectively eliminate any financial cost associated with developing affordable housing. The opportunity to have the State absorb most of the cost of the tax abatement should be motivating as it frees the Municipality of the majority of this financial burden. The added incentive of receiving 50 percent of the abatement at the end of the holding period has risk, but with the Developer's fee and the Developer and LPs net sales proceeds subordinated to the abatement repayment, the Developer and LPs will work hard to make sure there is sufficient appreciation in the value of building for them to achieve a profit. Most of the risk in the development has been shifted away from the Municipality to other parties who are experienced at managing the risk they are exposed to, and therefore, should be able to handle it more effectively. All in all, the Municipality has the opportunity to earn a fair risk-adjusted financial return of 9 percent (see Table 5.4.2.11) and, when combined with the opportunity to increase the number of units credited towards their Chapter 40B goal of 10 percent through participation in the bonus program, an excellent means to meet its affordable housing obligation all at minimal risk.

Table 5.4.2.11
Municipality's Investment Analysis

Year	(1) Real Estate Taxes	(2) Actual Real Estate Taxes Paid	(3) Tax Abatement (2)-(1)	(4) State Reimbursement of Real Estate Taxes @ 75% (3)*0.75	(5) Net Abatement to Municipality (3)-(4)	(6) Tax Recovery from Project @ 50%	(7) Municipality's Net Investment Flow (5)+(6)
1	183,347	45,837	(137,510)	103,133	(34,378)		(34,378)
2	197,611	45,837	(151,775)	113,831	(37,944)		(37,944)
3	180,380	45,837	(134,543)	100,907	(33,636)		(33,636)
4	188,839	45,837	(143,003)	107,252	(35,751)		(35,751)
5	195,789	45,837	(149,952)	112,464	(37,488)		(37,488)
6	196,004	45,837	(150,167)	112,625	(37,542)		(37,542)
7	194,201	45,837	(148,364)	111,273	(37,091)		(37,091)
8	200,920	45,837	(155,083)	116,313	(38,771)		(38,771)
9	206,606	45,837	(160,769)	120,577	(40,192)		(40,192)
10	212,784	45,837	(166,947)	125,210	(41,737)		(41,737)
11	229,338	64,187	(165,151)	123,864	(41,288)		(41,288)
12	209,340	87,705	(121,635)	91,226	(30,409)		(30,409)
13	219,158	111,584	(107,574)	80,680	(26,893)		(26,893)
14	227,223	136,726	(90,497)	67,873	(22,624)		(22,624)
15	227,473	159,573	(67,900)	50,925	(16,975)	1,025,435	1,008,460
	\$3,069,013	\$1,018,142	(\$2,050,871)	\$1,538,153	(\$512,718)	\$1,025,435	\$512,718
						IRR	8.9%

Conclusions

Our analysis has shown that the Limited Partners in these types of projects are earning returns far in excess of comparable investments facing similar risks. Although this conclusion may be regarded as bad news for these investors, the other parties to the public/private partnership should be optimistic, as this will allow more equity to be raised at a lower cost. We hope this analysis helps bring more transparency and efficiency to the investment structure of 80/20 projects, which may ultimately help to accomplish, or even exceed, the long-term goals of the program – to provide housing for those “in need” at a fair cost to all involved.

Chapter 6

Conclusions & Policy Implications

This thesis is hoped to have laid the foundation for a new mixed-income housing program in Massachusetts. It calls for a new public/private partnership that is consensual in nature, and attempts to openly and realistically assess the objectives of each partner so that a viable framework can be clearly defined. Our search for a new financial architecture has confirmed that the building blocks of an effective program are: a valid purpose, achievable goals, defensible assumptions, and proper alignment of risk and reward for all investment partners. We have analyzed both current and previous affordable housing programs and learned much from their strengths and weaknesses. The new capital structure we advance has carefully molded the appealing aspects of several of these programs into a framework anchored by the principles of successful mixed-income housing development.

This chapter presents our conclusions derived from an extensive review of current literature on affordable housing programs and policies as well as examples of successful mixed-income housing development projects. The Financial Model we created was instrumental in helping us reach and quantify these conclusions. Using the Model as a template to generate various scenarios helped shape our understanding of the numerous moving parts, and their relative importance in this type of undertaking.

1) The need for affordable housing is everywhere, for all walks of life.

Cities and suburbs suffer equally from the shortage of quality affordable housing. This ubiquitous need for safe, decent and affordable housing is currently unmet for people from all walks of life whose income is insufficient to pay market rents - especially in real estate boom periods. It is not just the unemployed or households dependent on welfare that need assistance, but the elderly, disabled and many working families have critical housing needs that must be met if well-balanced, healthy and safe communities are sought.

Given that a severe affordable housing crisis is accelerating – due to a steadily increasing number of low-income households with housing needs, combined with a shrinking supply of unsubsidized units affordable to these households – devoting time and resources to this cause through a new state program is amply justified.

2) It is imperative that real estate development and management fundamentals be followed.

Location - By definition, a viable mixed-income housing development must be thoughtfully located in neighborhoods where the difference between the market rent and affordable rent helps sustain the cross-subsidization. Locating these developments in more desirable locations has social, as well as economic, benefits. Bringing low-income families into well-served communities, or allowing what would otherwise be displaced residents to remain in their hometowns, offers these families the opportunity to benefit from the existing (and often superior) school systems, police protection, sanitation, and other public services. Of course, better neighborhoods usually translate into higher land prices, a major determinant of the project's financial feasibility. This issue is discussed in more detail below.

Quality Design - Superior design is key to competing for market tenants. Developers of mixed-income housing must invest more resources in design and construction to make these developments competitive in the market. Resources allocated to spacious units, architectural details, desirable amenities, quality site design and landscaping are monies well spent if the financial health of the development relies heavily on market tenants that have many housing choices. We vouch for not being "penny wise and pound foolish". Our Model confirms that even with a total project cost of \$154,000/unit, considered to be on the high-end of current projects, the baseline project performs more than satisfactorily with superior returns for all investors.

Strong Management/Marketing - Preserving the quality of a market-dependent affordable housing development, is equally as important as creating the project. Experience has shown that developers with sound market-based management and marketing expertise are the most success at maximizing the potential profits of mixed-income development while providing housing to all households on a long-term basis.

Financial Feasibility - A major lesson learned from the SHARP program is the importance of undertaking a project that is capable of generating sufficient NOI to support its annual debt service from the start. In other words, an affordable housing project must be treated as any real estate investment with the requirement of realistic and prudent forecasts of income, expenses and overall feasibility. A reasonable debt service coverage ratio and loan-to-value ratio can ensure that the lender and the borrower are both protected from unanticipated market conditions. Our Model addresses this issue through a 1.15 DSCR, an 86 percent LTV, and a one percent working capital reserve fund.

3) Unrealistic assumptions are irreversible.

We cannot stress enough the importance of realistic assumptions that are based on a clear understanding and incorporation of real estate market volatility. It is no news to real estate experts that rents do not trend perpetually upward. The use of growth rates obtained from a prominent portfolio of mixed-income multi-family properties is our way to correct for this problem. To the best of our knowledge, this approach has never been taken before. Even when this type of data is not available, however, it is still possible to project growth rates that reflect dips and hikes in rents and costs over a 15-year, or longer, investment horizon.

4) Debt is debt.

Again, one of the important lessons from SHARP is the misconception about debt in affordable housing programs. The parties seemed to perceive an almost non-existent default risk associated with the SHARP loans when, in fact, these loans should have been considered as second mortgages on the properties. Therefore, we strongly emphasize that to the extent that “soft loans” are used in the capital structure of affordable housing programs, they must be regarded as real, albeit risky, debt. The owners must be held accountable to meet all debt obligations until the debts are repaid in full. Our Model is consistent with this principle through the repayment of the structured, “soft” tax abatement debt at 50 percent, due upon sale or refinancing.

5) Mixed-income housing rewards all parties at a reasonable cost to the government.

Mixed-income housing as a means to alleviate the social problems of concentrated poverty and relieve the economic burden of housing the very poor in large developments is indeed the current direction of U.S. housing policy. Use of government-sponsored mechanisms to leverage private funds is one effective solution to the financial problems of affordable housing development and preservation. The mixed-income financing mechanisms offer financial rewards for the private investors at a sensible cost to the government. Furthermore, the involvement of the private sector brings the market discipline that has long been absent from federally-assisted housing programs.

The 80/20 Program is considered in this thesis as a viable solution to the problem of affordability in the more affluent suburbs where working families are being priced out of housing in their own communities. Recognizing that the supply of affordable units for working families continues to tighten as private

developers focus new construction on the high-end market where higher profit margins can be attained, we conclude that it is indeed possible to offer a reward package to the investors of a mixed-income housing projects that, ironically, *matches or dominates that available in other types of real estate development or investment of similar risk.*

6) Pricing of the tax credits needs to be improved.

The market for tax credits has gradually become more efficient over the past 14 years. We believe that this trend will continue because these credits are arguably undervalued resulting in returns in excess of a very reasonable after-tax return of 10 percent to the investors. Our Model indicates that there is room at the negotiating table to raise more equity. With more equity, these projects can achieve affordability for a larger number of low-income households, add a moderate-income tier, reach out to lower-income families, or reduce required densities.

7) Aligning the interest of all parties is key to long-term viability.

We strongly recommend that programs be conceived with the long-term investment performance of the projects considered equally as important as the production of rental units. There are many adverse consequences when this type of public/private projects fails mid-stream. In addition to financial distress for all investment parties, political issues arise often leading to the curtailment of public and private funds and the suspension of these much-needed programs. Furthermore, these programs need to be structured so that developments are not threatened by conversion into fully market-rate developments earlier than anticipated, adversely affecting those people in most critical needs, the very people the program intended to support.

This thesis concludes that the key to long-term viability is properly aligning the interests of all stakeholders/partners in the project. Unfortunately, from the perspective of interest alignment, the term public/private partnership is arguably an overused misnomer. An effective partnership is based on a consensual agreement as to how to allocate the risk and return of these projects to its partners. The project must be feasible for every party. Without the right incentives tailored to each party's interests and needs, the overall partnership objectives will not be met. This thesis has used a number of mechanisms to reach this goal.

LP Investment - First, the Model allows for the tax credit investors (LPs) to participate in the development and operational risks of the project, and compensates them accordingly. As discussed in detail above, the investors are able to achieve fair returns that are in line with the risks involved. The LPs thus have sufficient incentives to invest in mixed-income projects and are further encouraged to oversee the decisions and actions of Management and to monitor its performance beyond the narrow maintenance of their compliance status.

Developer - The Developer bears the greatest risk as the “deal-maker” for the project. This risk is more weighed towards the early stages of the project (site control, entitlement and financing/credit allocation) for which the Developer is typically compensated early on. Our Model provides for the Developer’s long-term performance through both a current and deferred compensation mechanism. The Developer also shares risk and reward with the investors through a 25 percent interest in the cash flow and net sale proceeds. In this way, the Developer’s risks and rewards are more evenly spread over the investment period. Being rewarded fairly and incrementally, the Developer is continuously motivated to honor his/her obligations towards the project and the partnership.

Municipality - We believe it is of the outmost importance to make a meaningful place for the municipality at the table. As we found in the previous Chapter, a well-conceived public/private partnership will provide for the Municipality’s role not as merely tax collector/regulator, but also as a critical “investor”. In return for taking the financial and political risks associated with a reduction in property taxes and zoning relief, the partnership can be structured so that the Municipality can be fairly rewarded. We have envisioned a reward package with both monetary and non-monetary value, leveraging off state law and financial resources.

In order to make the partnership more attractive to the Municipality and to help spur construction of affordable housing, we are proposing two incentives, financial and regulatory, aimed squarely at the Municipality. Piggybacking these two incentive mechanisms makes use of the trade-off between tax abatement and density. With a protected IRR of approximately 9 percent, and a Chapter 40B bonus, we believe that the financial and regulatory interests of the municipality are well aligned with the other involved parties.

First, as a financial incentive, the State would reimburse the Municipality for a portion of the annual real estate tax abatement that, when combined with a 50 percent repayment of the full amount of the tax abatement due to the City from the project, will effectively equal a 9 percent return to the Municipality

over the fifteen year period¹. In order for the Municipality to have unrestricted use of the 50 percent tax abatement repayment, the number of affordable units located in that Municipality must have reached the 10 percent quota as mandated by Chapter 40B at the time of sale or refinancing. If the 10 percent quota has not been achieved by that time, the Municipality must contribute the full tax abatement repayment to a Municipality controlled Affordable Housing Trust Fund that is dedicated to the development of additional affording housing in the Municipality.

A second incentive offered to the Municipality would provide a bonus system as municipalities strive to meet the Chapter 40B 10 percent mandate. Three different types of bonuses are proposed: “Scattered-Site”; “Increased Affordability” and “Priority-Need”. Although these bonuses are incentives aimed at municipalities, they will indirectly (i.e., positively) affect the Developer’s negotiations with the local boards and public agencies. The end result will be more flexibility with regard to project sizes and income-mixes that will further benefit the communities and the tenants of mixed-income housing developments, yet be economically feasible. The State would reserve the option to review these policies after five years and adjust them accordingly.

The “Scattered-Site” bonus provides an incentive to a municipality for granting comprehensive permit approval for mixed-income housing projects that is scaled to the project size. The smaller the size of the project, the greater the multiplier effect towards the 10 percent goal. This will encourage municipalities to offer appropriate incentives to, and negotiate with, developers to develop on scattered sites throughout their jurisdiction, further aiding the ambition of mixed-income housing advocates to de-concentrate affordable housing. We propose that the following multipliers be applied to increase the total number of units that will be counted towards the Chapter 40B 10 percent goal as follows.

Table 6.1
Scattered Site Bonus Configuration

# of Units in Development	Multiplier	Bonus towards Chapter 40B 10% Mandate
0-50	2	# units x 2
51-100	1.75	# units x 1.75
101-150	1.5	# units x 1.5
151-200	1.25	# units x 1.25
201 & above	1	no bonus

¹ In our Baseline Scenario, the Municipality would be reimbursed 75 percent of the abatement each year.

The “Increased Affordability” bonus will provide an additional incentive to the municipality to grant permits to mixed-income developments. Under current law, mixed-income rental projects that are “subsidized” and meet the guidelines preserving affordability, such as those under the 80/20 Program, are allowed to count all of the units (not just the affordable units) in the project towards the Chapter 40B 10 percent goal. We propose that as a supplement to this, if *additional* units above the required 20 percent (which are set-aside for households at, or below, 50 percent AMI) are added to the project and set-aside for households at, or below, 80 percent AMI, the project would earn a bonus toward its Chapter 40B 10 percent goal equivalent to the *total number of low- and low to moderate-income units* in the project.

Our baseline project can be examined to determine if these two bonus systems are economically viable. As shown in Table 5.3.1, converting 6 market-rate units to low to moderate-income units (for households earning 80 percent, or less, AMI) is still financially feasible for the Developer and the LPs. Therefore, the bonus system would allow the municipality to count this 125-unit project as a 219-unit project towards the Chapter 40B 10 percent goal.² This is in effect a 75 percent increase in the number of units credited toward Chapter 40B, which will provide a substantial incentive to municipalities that actively endeavor to provide affordable housing in their jurisdiction. We further propose that the additional low to moderate-income units added to the project be restricted to households that have resided in the municipality for at least the past five years. This “Local Preference” provision would allow communities to help meet the housing needs of their middle-income residents who are being priced out of housing in their own community.

The “Priority-Need” bonus addresses the time-sensitivity of these projects given the acute shortage of affordable housing in extremely strong real estate markets such as the market the Boston area is currently experiencing. Consistent with the over-arching goal of affordable housing production, we propose an additional 25 percent increase in total number of units credited towards the Chapter 40B 10 percent goal if the municipality approves a comprehensive permit application within 12 months from the enactment of this bonus program. This overall bonus would decrease to 15 percent for permit approvals within 12 to 24 months and would be reduced to 5 percent for permit approvals within 24 to 36 months from the enactment date.

² The credit of 219 units is derived as follows. Under existing law, being an 80/20 Project qualifies the baseline project for a 125 unit credit towards the Chapter 40B 10% goal. The size of this project qualifies for a 150% “Scattered-Site” bonus bringing the total credit to 188 (125 x 1.5). The baseline project includes 25 units set-aside for households at 50% AMI. If 6 market-rate units are replaced with 6 units set-aside for households at, or below, 80% AMI, then the total number of units qualified for the “Increased Affordability” bonus is 31 (25 + 6). When this is added with the “Scattered-Site” bonus, the result is 219 units (188 + 31) credited to the Chapter 40B 10% goal.

MHFA - As for the first-mortgage lender (MHFA), we believe that the Agency's interest is aligned with the other parties through stressing the importance of initial feasibility and long-term viability.

State - The State's participation through the state tax credits and reimbursement of three quarters of the tax abatement to the Municipality is believed to be a more cost-effective way to support affordable housing production and preservation, as compared to previous state programs such as SHARP. In fact, the adoption of this proposed local tax reimbursement program is estimated to cost less than half of what the Commonwealth's financial commitment was under SHARP³.

The new financial architecture for developing mixed-income housing presented in this paper is believed to have taken into consideration the underlying interests of the important partners to the public/private partnership. Each partner needs incentives both to participate and to perform. We believe the framework described herein justifies participation for each of the partners and significantly improves their alignment of interests and incentives to perform. In addition, the design of the capital structure has taken into consideration the unpredictability of real estate cycles and provided mechanisms to help these developments successfully perform amid adversity.

Although reasonable returns and well-aligned incentives lay a solid foundation for successful partnerships, for optimal success all partners need to fully embrace the fundamental objectives of mixed-income projects. New developments cannot simply be isolated projects that have the look and feel of something that has been thrust upon a municipality and grudgingly accepted simply to reach the State's Chapter 40B mandate of 10 percent affordability. These developments need to be thought of as a new neighborhood and woven into the fabric of the community. Forward looking cities and towns realize that they need a diverse population to flourish and the challenge to achieve this will only become more difficult as the years pass. We believe that the financial architecture and public policies we have discussed will serve as building blocks for the construction of new private/public partnerships and ultimately lead to the development of mixed-income housing in the Commonwealth of Massachusetts in a manner such that everyone wins.

³ Model estimates a total of \$1.54 million in total state reimbursement of real estate tax abatement to the City/Town over 15 years for 25 low-income units. This is equal to \$342/month/low-income unit. SHARP's total appropriation of \$480 million for 3,131 low-income units results in \$852/month/low-income unit. Even adding the cost of the state tax credit (\$223/month/low-income unit) to the per unit estimate for state reimbursement of local taxes, still results in a cost burden of approximately two third of SHARP's cost.

Appendix A

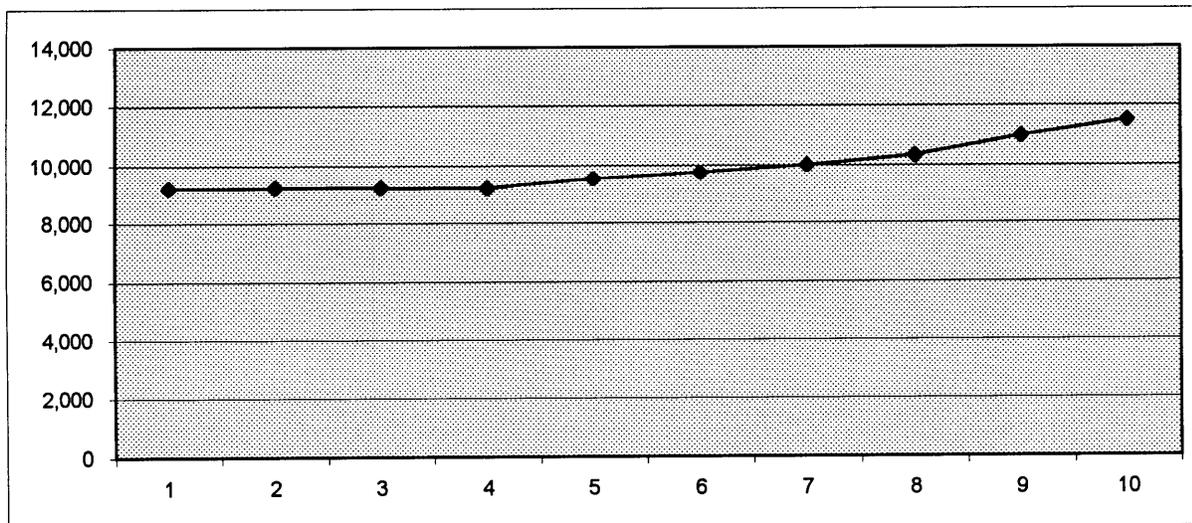
SHARP Growth Rates

Gross Rent

Weighted-Average Gross Rent /Unit

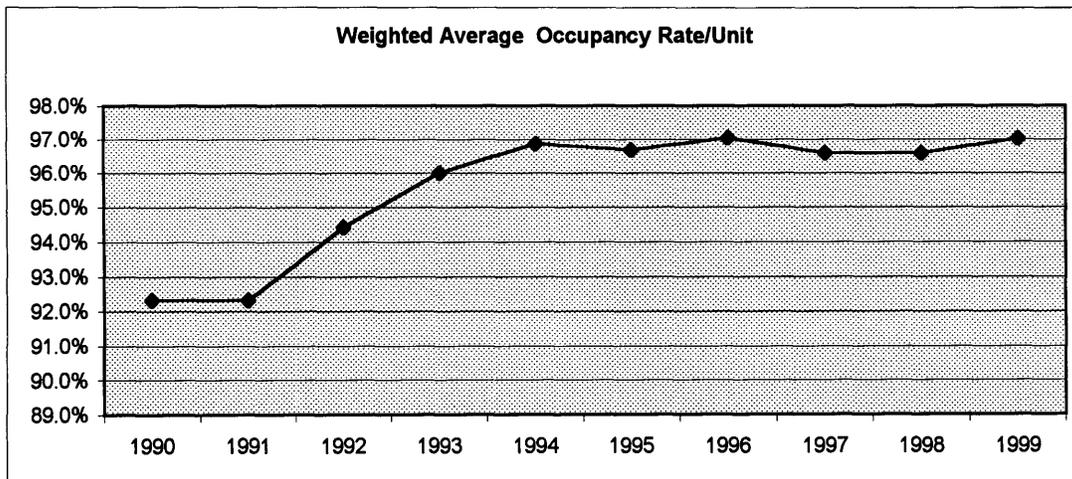
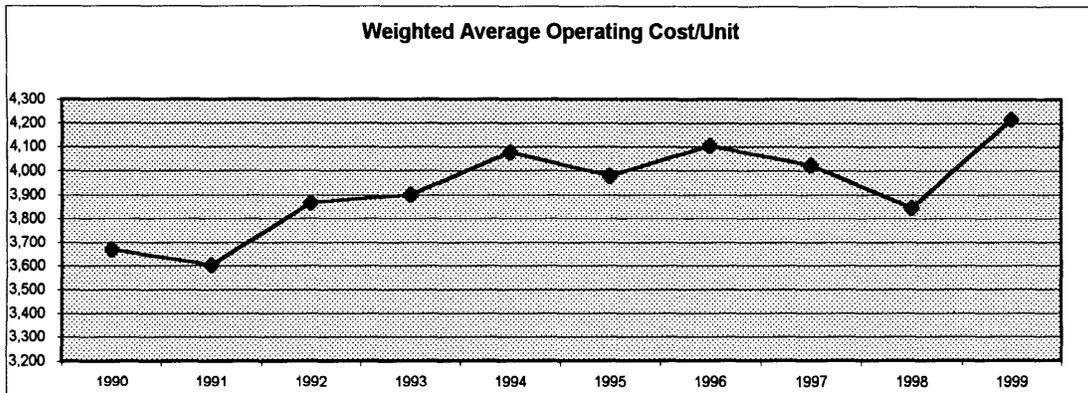
	# Units	Weight	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Anchorage Apartments	112	3.73%	173	179	183	188	193	190	192	203	222	247
Anchor's Weigh	87	2.90%	328	325	321	322	320	326	345	370	405	428
Blue Hills Village	98	3.26%	338	345	349	353	358	364	366	376	390	413
Highland Apartments	117	3.89%	184	181	180	174	184	186	186	181	184	188
Church Corner	85	2.83%	833	813	816	827	853	902	948	1,001	1,120	1,164
Kimball Court Apartments	184	6.13%	330	328	317	313	318	328	344	369	398	417
Littlebrook	96	3.20%	487	475	474	466	469	472	479	497	528	563
Malden Gardens	140	4.66%	285	288	291	294	301	311	323	335	360	389
Mariner's Hill	90	3.00%	483	486	493	487	501	516	536	548	590	614
Mill Valley Estates	148	4.93%	310	327	331	333	338	346	357	362	373	373
No Stoughton Village	100	3.33%	385	386	382	384	386	393	399	407	426	443
Olde Derby Village	139	4.63%	618	634	641	637	640	650	655	667	717	755
Oxford House at Queen	203	6.76%	203	198	199	199	366	387	411	439	463	505
Plantation Tower	107	3.56%	263	256	259	261	269	275	281	282	289	297
Pond Side	90	3.00%	496	497	491	489	501	505	513	529	573	609
Ramblewood II	138	4.59%	486	498	492	489	498	516	532	546	561	591
Riverboat Village	170	5.66%	210	213	205	206	205	206	206	212	220	234
Ship's Watch	99	3.30%	591	591	600	593	611	622	618	626	636	646
Stone Brook	203	6.76%	265	257	254	258	257	271	288	308	339	354
Summer Hill House	75	2.50%	337	341	348	355	365	373	380	389	406	422
Taunton Woods	120	3.99%	246	244	237	236	241	246	254	268	280	291
The Millery	98	3.26%	436	436	431	428	433	446	460	479	509	543
The Royal Worcester	155	5.16%	423	426	440	438	440	436	440	456	482	499
Village at Mansfield Depo	150	4.99%	479	474	460	459	461	466	468	474	490	523
Total	3004	1	9,189	9,198	9,193	9,190	9,508	9,732	9,982	10,325	10,982	11,508
Growth Rate				0.09%	-0.05%	-0.03%	3.45%	2.36%	2.57%	3.44%	6.36%	4.80%

Weighted-Average Gross Rent /Unit



Operating Costs

Weighted-Average Operating Expenses/Unit												
	# Units	Weight	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Anchorage Apartments	112	3.73%	97	101	119	124	134	123	110	117	99	119
Anchor's Weigh	87	2.90%	122	127	136	155	159	133	150	156	137	158
Blue Hills Village	98	3.26%	107	96	104	115	121	123	118	124	107	112
Highland Apartments	117	3.89%	142	130	126	121	117	114	112	110	104	105
Church Corner	85	2.83%	168	133	138	128	141	156	147	161	153	186
Kimball Court Apartments	184	6.13%	216	242	245	239	227	233	229	227	206	208
Littlebrook	96	3.20%	166	161	182	160	154	150	163	156	143	152
Malden Gardens	140	4.66%	166	177	198	224	225	222	242	246	250	254
Mariner's Hill	90	3.00%	109	118	132	117	115	111	121	68	109	116
Mill Valley Estates	148	4.93%	214	174	188	199	210	227	202	222	200	200
No Stoughton Village	100	3.33%	104	102	115	119	122	122	119	127	108	116
Olde Derby Village	139	4.63%	169	168	165	170	173	171	189	190	159	171
Oxford House at Queen	203	6.76%	173	145	146	146	283	268	276	273	282	326
Plantation Tower	107	3.56%	124	143	169	157	170	163	189	150	161	174
Pond Side	90	3.00%	132	129	135	135	145	132	140	146	143	157
Ramblewood II	138	4.59%	170	126	152	168	170	172	180	189	149	195
Riverboat Village	170	5.66%	153	173	178	149	152	176	166	171	182	187
Ship's Watch	99	3.30%	146	144	139	152	153	140	144	151	130	149
Stone Brook	203	6.76%	210	241	245	256	251	230	242	244	251	300
Summer Hill House	75	2.50%	89	89	93	95	100	79	121	81	97	94
Taunton Woods	120	3.99%	135	119	138	143	154	144	146	155	137	150
The Millery	98	3.26%	123	118	142	134	141	144	145	120	127	134
The Royal Worcester	155	5.16%	251	256	298	312	259	247	245	237	224	251
Village at Mansfield Depo	150	4.99%	187	194	182	184	200	199	208	201	185	202
Total	3004	1	3,670	3,603	3,866	3,899	4,076	3,979	4,103	4,022	3,843	4,216
Growth Rate				-1.82%	7.29%	0.87%	4.53%	-2.38%	3.11%	-1.98%	-4.44%	9.70%

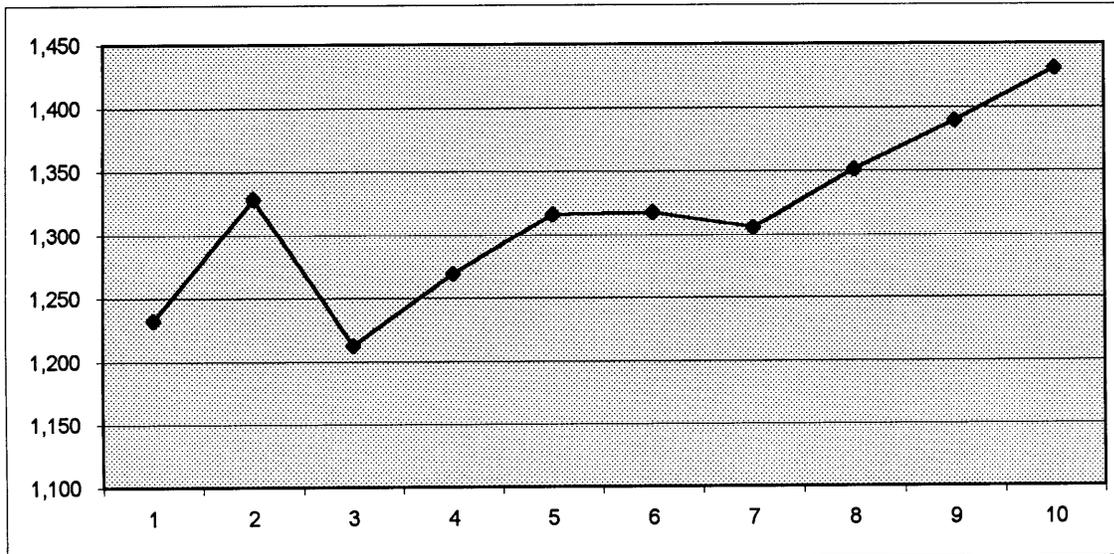


Real Estate Taxes

Weighted-Average Real Estate Taxes/Unit

	# Units	Weight	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Anchorage Apartments	112	3.73%	20	22	21	22	23	23	24	24	26	31
Anchor's Weigh	87	2.90%	23	24	27	18	21	21	22	23	24	25
Blue Hills Village	98	3.26%	23	24	22	25	25	27	27	27	25	27
Highland Apartments	117	3.89%	9	10	11	11	10	9	10	10	9	9
Church Corner	85	2.83%	52	59	53	62	57	58	63	61	63	67
Kimball Court Apartments	184	6.13%	16	13	13	13	14	15	17	17	20	20
Littlebrook	96	3.20%	17	28	14	25	26	52	19	30	32	30
Malden Gardens	140	4.66%	31	18	15	15	18	25	28	27	21	27
Mariner's Hill	90	3.00%	33	27	24	30	35	25	29	29	30	39
Mill Valley Estates	148	4.93%	9	21	27	24	0	25	26	25	25	25
No Stoughton Village	100	3.33%	31	33	29	23	24	24	25	25	28	30
Olde Derby Village	139	4.63%	39	43	40	33	44	43	34	38	40	39
Oxford House at Queen	203	6.76%	10	8	8	9	7	6	7	10	9	10
Plantation Tower	107	3.56%	18	19	15	17	19	19	20	22	20	22
Pond Side	90	3.00%	11	24	28	23	23	25	25	26	30	30
Ramblewood II	138	4.59%	45	42	31	42	44	44	39	42	42	4
Riverboat Village	170	5.66%	22	20	18	20	12	15	15	15	16	16
Ship's Watch	99	3.30%	21	26	25	26	26	26	32	29	27	30
Stone Brook	203	6.76%	16	15	17	16	17	18	18	18	18	17
Summer Hill House	75	2.50%	25	25	24	27	30	9	33	35	29	29
Taunton Woods	120	3.99%	16	17	12	14	16	11	9	11	10	10
The Millery	98	3.26%	37	38	34	34	27	31	39	36	39	42
The Royal Worcester	155	5.16%	17	16	18	18	19	19	21	22	23	24
Village at Mansfield Depo	150	4.99%	692	756	688	723	782	748	726	748	785	829
Total	3004	1	1,233	1,329	1,213	1,270	1,316	1,318	1,306	1,351	1,389	1,431
Growth Rate				7.78%	-8.72%	4.69%	3.68%	0.11%	-0.92%	3.46%	2.83%	2.99%

Weighted-Average Real Estate Taxes/Unit



Appendix B

Baseline Project Pro Formas

Project Pro Forma (Years 1-16)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Income								
Gross Rental Income	\$2,187,407	\$2,189,375	\$2,188,280	\$2,187,624	\$2,263,097	\$2,316,506	\$2,376,040	\$2,457,776
Vacancy (5%)	(109,370)	(109,469)	(109,414)	(109,381)	(113,155)	(115,825)	(118,802)	(122,889)
Effective Gross Income	2,078,036	2,079,906	2,078,866	2,078,243	2,149,942	2,200,681	2,257,238	2,334,887
Expenses								
Operating Expenses	(537,500)	(527,718)	(566,188)	(571,114)	(596,965)	(582,777)	(600,902)	(589,004)
Real Estate Taxes	(183,347)	(197,611)	(180,380)	(188,839)	(195,789)	(196,004)	(194,201)	(200,920)
Tax Abatement	137,510	151,775	134,543	143,003	149,952	150,167	148,364	155,083
Replacement Reserve	(37,500)	(38,625)	(39,784)	(40,977)	(42,207)	(43,473)	(44,777)	(46,120)
Net Operating Income	\$1,457,199	\$1,467,727	\$1,427,058	\$1,420,315	\$1,464,913	\$1,528,594	\$1,565,723	\$1,653,927
Debt Service								
Tax-Exempt MHFA Bonds	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)
Developer Deferred Comp	0	0	0	0	0	(65,081)	(65,081)	(65,081)
Before Tax Cash Flow	\$190,069	\$200,597	\$159,928	\$153,185	\$197,784	\$196,384	\$233,513	\$321,716
Amortization - Permanent loan	67,034	72,145	77,646	83,567	89,939	96,797	104,177	112,121
Amortization - Developer loan	0	0	0	0	0	0	0	0
Capital Reserves	37,500	38,625	39,784	40,977	42,207	43,473	44,777	46,120
Depreciation	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)
Taxable Income	(313,848)	(297,084)	(331,093)	(330,722)	(278,522)	(271,798)	(225,984)	(128,494)
General Partner (1%)	(3,138)	(2,971)	(3,311)	(3,307)	(2,785)	(2,718)	(2,260)	(1,285)
Limited Partners (99%)	(310,709)	(294,113)	(327,782)	(327,415)	(275,737)	(269,080)	(223,724)	(127,209)

Amortization Schedules	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
Permanent Loan								
Beginning Balance	\$15,738,965	\$15,671,931	\$15,599,785	\$15,522,139	\$15,438,572	\$15,348,633	\$15,251,837	\$15,147,659
Payment	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)
Interest	1,200,096	1,194,965	1,189,484	1,183,563	1,177,191	1,170,333	1,162,953	1,155,009
Principle	67,034	72,145	77,646	83,567	89,939	96,797	104,177	112,121
Ending Balance	\$15,671,931	\$15,599,785	\$15,522,139	\$15,438,572	\$15,348,633	\$15,251,837	\$15,147,659	\$15,035,538

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Income								
Gross Rental Income	\$2,614,091	\$2,739,567	\$2,742,033	\$2,740,662	\$2,739,839	\$2,834,364	\$2,901,255	\$2,975,817
Vacancy (5%)	(130,705)	(136,978)	(137,102)	(137,033)	(136,992)	(141,718)	(145,063)	(148,791)
Effective Gross Income	2,483,386	2,602,589	2,604,931	2,603,629	2,602,847	2,692,646	2,756,192	2,827,026
Expenses								
Operating Expenses	(562,852)	(617,449)	(606,211)	(650,404)	(656,062)	(685,782)	(669,460)	(690,280)
Real Estate Taxes	(206,606)	(212,784)	(229,338)	(209,340)	(219,158)	(227,223)	(227,473)	(225,380)
Tax Abatement	160,769	166,947	165,151	121,635	107,574	90,497	67,900	44,315
Replacement Reserve	(47,504)	(48,929)	(50,397)	(51,909)	(53,466)	(55,070)	(56,722)	(58,424)
Net Operating Income	\$1,827,194	\$1,890,374	\$1,884,136	\$1,813,611	\$1,781,735	\$1,815,068	\$1,870,437	\$1,897,257
Debt Service								
Tax-Exempt MHFA Bonds	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)
Developer Deferred Comp	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)
Before Tax Cash Flow	\$494,983	\$558,164	\$551,926	\$481,401	\$449,525	\$482,857	\$538,226	\$565,047
Amortization - Permanent loan	120,670	129,871	139,774	150,432	161,902	174,247	187,534	201,833
Amortization - Developer loan	0	0	0	0	0	0	0	0
Capital Reserves	47,504	48,929	50,397	51,909	53,466	55,070	56,722	58,424
Depreciation	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)
Taxable Income	54,706	128,513	133,645	75,290	56,441	103,723	174,030	216,852
General Partner (1%)	547	1,285	1,336	753	564	1,037	1,740	2,169
Limited Partners (99%)	54,159	127,228	132,309	74,537	55,877	102,686	172,290	214,684

Amortization Schedules	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16
Permanent Loan								
Beginning Balance	\$15,035,538	\$14,914,868	\$14,784,997	\$14,645,223	\$14,494,791	\$14,332,889	\$14,158,642	\$13,971,108
Payment	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)
Interest	1,146,460	1,137,259	1,127,356	1,116,698	1,105,228	1,092,883	1,079,596	1,065,297
Principle	120,670	129,871	139,774	150,432	161,902	174,247	187,534	201,833
Ending Balance	\$14,914,868	\$14,784,997	\$14,645,223	\$14,494,791	\$14,332,889	\$14,158,642	\$13,971,108	\$13,789,276

Added Value from Operations (Years 1-16)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Net Operating Income	\$1,457,199	\$1,467,727	\$1,427,058	\$1,420,315	\$1,464,913	\$1,528,594	\$1,565,723	\$1,653,927
Debt Service								
Tax-Exempt MHFA Bonds	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)
Developer Deferred Comp	0	0	0	0	0	(65,081)	(65,081)	(65,081)
Taxable Income	\$190,069	\$200,597	\$159,928	\$153,185	\$197,784	\$196,384	\$233,513	\$321,716
LP Share @ 75%	142,552	150,448	119,946	114,889	148,338	147,288	175,134	241,287
Developer Share @ 25%	47,517	50,149	39,982	38,296	49,446	49,096	58,378	80,429

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Net Operating Income	\$1,827,194	\$1,890,374	\$1,884,136	\$1,813,611	\$1,781,735	\$1,815,068	\$1,870,437	\$1,897,257
Debt Service								
Tax-Exempt MHFA Bonds	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)
Developer Deferred Comp	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)
Taxable Income	\$494,983	\$558,164	\$551,926	\$481,401	\$449,525	\$482,857	\$538,226	\$565,047
LP Share @ 75%	371,237	418,623	413,944	361,051	337,143	362,143	403,670	423,785
Developer Share @ 25%	123,746	139,541	137,981	120,350	112,381	120,714	134,557	141,262

Breakeven Tax Credit Pro Forma (Years 1-16)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Net Operating Income	1,267,130	1,267,130	1,267,130	1,267,130	1,267,130	1,332,210	1,332,210	1,332,210
Debt Service								
Tax-Exempt MHFA Bonds	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)
Developer Deferred Comp	0	0	0	0	0	(65,081)	(65,081)	(65,081)
Before Tax Cash Flow	\$0							
Amortization - Permanent loan	67,034	72,145	77,646	83,567	89,939	96,797	104,177	112,121
Amortization - Developer loan	0	0	0	0	0	0	0	0
Capital Reserves	37,500	36,818	39,501	39,845	41,650	40,659	41,923	41,083
Depreciation	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)
Taxable Income	(503,917)	(488,489)	(481,303)	(485,039)	(476,862)	(470,986)	(462,351)	(455,237)
General Partner (1%)	(5,039)	(4,935)	(4,913)	(4,850)	(4,769)	(4,710)	(4,624)	(4,552)
Limited Partners (99%)	(498,878)	(494,494)	(486,390)	(480,189)	(472,094)	(466,286)	(457,727)	(450,685)

	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Net Operating Income	\$1,332,210	\$1,332,210	\$1,332,210	\$1,332,210	\$1,332,210	\$1,332,210	\$1,332,210	\$1,332,210
Debt Service								
Tax-Exempt MHFA Bonds	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)	(1,267,130)
Developer Deferred Comp	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)	(65,081)
Before Tax Cash Flow	\$0							
Amortization - Permanent loan	120,670	129,871	139,774	150,432	161,902	174,247	187,534	201,833
Amortization - Developer loan	0	0	0	0	0	0	0	0
Capital Reserves	39,269	43,078	42,294	45,377	45,772	47,845	46,707	48,159
Depreciation	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)	(608,451)
Taxable Income	(448,512)	(435,502)	(426,384)	(412,643)	(400,777)	(386,359)	(374,211)	(358,459)
General Partner (1%)	(4,485)	(4,355)	(4,264)	(4,126)	(4,008)	(3,864)	(3,742)	(3,585)
Limited Partners (99%)	(444,027)	(431,147)	(422,120)	(408,516)	(396,770)	(382,495)	(370,469)	(354,875)

Appendix C

Rent & Unit Size Comparables

Property	# of Units	Year Built	# of Bedrooms	Unit Size (Sq. Ft.)	Monthly Rental	Monthly Rent/SF
Avalon Essex One Avalon Drive Peabody, MA	154	2000	1	779	\$ 1,331	\$ 1.71
			1	824	1,431	\$ 1.74
			1	955	1,566	\$ 1.64
			1	992	1,741	\$ 1.76
			2	1,174	1,586	\$ 1.35
			2	1,225	1,799	\$ 1.47
			2	1,400	1,916	\$ 1.37
Avalon Oaks One Avalon Drive Wilmington, MA	204	1999	1	764	\$ 1,422	\$ 1.86
			1	955	1,447	\$ 1.52
			1	815	1,542	\$ 1.89
			1	992	1,567	\$ 1.58
			2	1,174	1,737	\$ 1.48
			2	1,400	1,757	\$ 1.26
			2	1,225	1,847	\$ 1.51
Avalon at Faxon Park 500 Falls Boulevard Quincy, MA	171	1998	1	698	\$ 1,280	\$ 1.83
			1	915	1,360	\$ 1.49
			1	780	1,380	\$ 1.77
			1	967	1,510	\$ 1.56
			2	1,013	1,640	\$ 1.62
			2	1,112	1,750	\$ 1.57
			2	1,353	1,910	\$ 1.41
Avalon West 100 Charlestown Meadows Drive Westborough, MA	120	1997	1	776	\$ 1,295	\$ 1.67
			1	1041	1,435	\$ 1.38
			2	1386	1,955	\$ 1.41
			2	1561	1,995	\$ 1.28
Avalon at Lexington 100 Lexington Ridge Drive Lexington, MA	198	1994	1	853	\$ 1,752	\$ 2.05
			1	1,045	1,952	\$ 1.87
			2	920	1,850	\$ 2.01
			2	1,186	2,040	\$ 1.72
			2	1,350	2,425	\$ 1.80
Applebriar Apartments One Applebriar Lane Marlborough, MA	164	1989	1	818	\$ 1,305	\$ 1.60
			1	900	1,480	\$ 1.64
			2	1,096	1,680	\$ 1.53
			2	1,446	1,935	\$ 1.34
Canton Arboreteum 1 Arboretum Way Canton, MA	156	1989	1	667	\$ 1,395	\$ 2.09
			2	872	1,580	\$ 1.81
			2	921	1,635	\$ 1.78
The Arboretum 1 Arboretum Way Burlington, MA	312	1989	1	750	\$ 1,500	\$ 2.00
			2	995	1,750	\$ 1.76
			2	1025	1,845	\$ 1.80
Winsor Ridge at Westborough 1 Winsor Ridge Drive Westborough, MA	300	1972	1	780	\$ 1,205	\$ 1.54
			2	960	1,510	\$ 1.57
			2	1020	1,525	\$ 1.50
Winsor Village at Waltham 976 Lexington Street Waltham, MA	707	1972	1	885	\$ 1,325	\$ 1.50
			2	1,030	1,550	\$ 1.50

Source: www.springstreet.com/apartments August, 2000.

Appendix D

Development Fee Calculation

Total Development Cost (excluding Dev Fee)		\$18,151,701
Developer Overhead	(500,000)	
Reserve	(37,500)	
	<u>(537,500)</u>	<u>(537,500)</u>
Qualifying Development Costs		\$17,614,201
Allowable Development Fee Calculation		
First \$3,000,000 of QDC @	10.0%	300,000
Next \$2,000,000 of QDC @	7.5%	150,000
Over \$5,000,000 of QDC @	5.0%	<u>630,710</u>
Total Development Fee		\$1,080,710
Paid from Equity @ 25%		270,178
Financed by Note @ 75%		<u>810,533</u>

Interest Rate	6% Applicable Federal Rate (AFR)							
	1	2	3	4	5	6	7	8
Beginning Balance	\$810,533	\$859,165	\$910,714	\$965,357	\$1,023,279	\$1,084,675	\$1,084,675	\$1,084,675
Payments	0	0	0	0	0	65,081	65,081	65,081
Interest	48,632	51,550	54,643	57,921	61,397	65,081	65,081	65,081
Principle	0	0	0	0	0	0	0	0
Ending Balance	\$859,165	\$910,714	\$965,357	\$1,023,279	\$1,084,675	\$1,084,675	\$1,084,675	\$1,084,675
	9	10	11	12	13	14	15	16
Beginning Balance	\$1,084,675	\$1,084,675	\$1,084,675	\$1,084,675	\$1,084,675	\$1,084,675	\$1,084,675	\$1,084,675
Payments	65,081	65,081	65,081	65,081	65,081	65,081	65,081	65,081
Interest	65,081	65,081	65,081	65,081	65,081	65,081	65,081	65,081
Principle	0	0	0	0	0	0	0	0
Ending Balance	\$1,084,675	\$1,084,675	\$1,084,675	\$1,084,675	\$1,084,675	\$1,084,675	\$1,084,675	\$1,084,675

Appendix E

Real Estate Tax Abatement Calculation

**Model's Assumption of
Real Estate Tax Abatement**

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Real Estate Taxes	\$183,347	\$197,611	\$180,380	\$188,839	\$195,789	\$196,004	\$194,201	\$200,920	\$206,606	\$212,784
Exemption from add. Taxes ¹	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Real Estate Taxes Paid	(45,837)	(45,837)	(45,837)	(45,837)	(45,837)	(45,837)	(45,837)	(45,837)	(45,837)	(45,837)
TOTAL ABATEMENT	\$137,510	\$151,775	\$134,543	\$143,003	\$149,952	\$150,167	\$148,364	\$155,083	\$160,769	\$166,947

	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20
Real Estate Taxes	\$229,338	\$209,340	\$219,158	\$227,223	\$227,473	\$225,380	\$233,178	\$239,777	\$246,947	\$266,159
Exemption from add. taxes	90%	80%	70%	60%	50%	40%	30%	20%	²	-
Real Estate Taxes Paid	(64,187)	(87,705)	(111,584)	(136,726)	(159,573)	(181,065)	(209,062)	(237,659)	(246,947)	(266,159)
TOTAL ABATEMENT	\$165,151	\$121,635	\$107,574	\$90,497	\$67,900	\$44,315	\$24,117	\$2,119	\$0	\$0

¹ *Predevelopment Taxes on Parcel is assumed to be equal to 25% of Yr. 1 Taxes or \$45,837*

² *Taxes to be paid under the program cannot exceed the original tax amount*

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