



17555 PEAK AVENUE MORGAN HILL, CALIFORNIA 95037

City Hall  
Council Chambers  
17555 Monterey Road  
Morgan Hill, California

Chairperson:	Swanee Edwards
Vice-Chairperson:	Chuck Dillmann
Commissioner:	John Liegl
Commissioner:	Robert Graham
Commissioner:	Elena Ann Miles
Staff:	BAHS Margarita Balagso

## **MOBILE HOME RENT COMMISSION NOTICE**

**SPECIAL MEETING**  
**DECEMBER 3, 2007**  
**7:00 P.M**

## **Agenda**

**CALL TO ORDER**  
Chair Edwards

**ROLL CALL**

**DECLARATION OF POSTING OF AGENDA**  
In compliance with Government Code 54954.2  
Flag Salute

### **PUBLIC COMMENTS**

**NOW IS THE TIME FOR COMMENTS FROM THE PUBLIC REGARDING ITEMS NOT ON THIS AGENDA.**

The Commission welcomes comments from all individuals on any agenda item being considered by the Committee. Please complete a Speaker Card and present it to the Secretary/Staff Liaison. This will assist the Committee Members in hearing your comments at the appropriate time. In the interest of brevity and timeliness and to ensure the participation of all those desiring an opportunity to speak, comments presented to the Committee are limited to **Three Minutes**. We appreciate your cooperation.

**BUSINESS:**

1. **HEAR WINDMILL MOBILE ESTATES OWNER'S PETITION** regarding proposed rent increase

**ADJOURNMENT** Next Regular Meeting is scheduled for February 25, 2008

**NOTICE**  
**AMERICANS WITH DISABILITIES ACT (ADA)**

The City of Morgan Hill complies with the Americans with Disabilities Act (ADA) and will provide reasonable accommodation to individuals with disabilities to ensure equal access to all facilities, programs and services offered by the City.

If assistance is needed regarding any item appearing on the Mobile Home Rent Commission agenda, please contact the Office of the City Clerk at 17555 Peak Avenue, or call 779-7259 (or, Hearing Impaired only – TDD 776-7381) to request accommodation.



CITY OF MORGAN HILL

17555 PEAK AVENUE, MORGAN HILL, CA 95037 (408) 776-7373

CITY OF MORGAN HILL

OCT 16 2007

**PETITION FOR HEARING/SPACE RENT REVIEW**

Hearing requested for:

Rent Increase  
 Service Reduction  
 Other

CITY OF MORGAN HILL  
CITY CLERK'S OFFICE

Mobile Home Park Name:

**Windmill Mobile Estates**

Designated Representative to Receive Correspondence:

**C. William Dahlin**

Address: **Hart, King & Coldren**  
**400 Sandpointe, 4<sup>th</sup> Floor**  
**Santa Ana, CA 92707**

Telephone:  
**714-432-8700**

**RESIDENT - Petition for Hearing**

(Provide the following if it applies to your petition)

Date of Service Reduction and/or Park Owner  
 Notice of Increase:

Spaces Affected by Service Reduction and/or Notice:

**Rent Increase:**

Copy of "Owner's Notice of Space Rent Increase"  
 Computation of Consumer Price Index for the Months Prior to Notice (City staff can assist).  
 Other information: \_\_\_\_\_

**Service Reduction:**

Full Computation of Value and Evidence of Service Reduction  
 Other information: \_\_\_\_\_

**Request for Hearing:**

We/I hereby request the City of Morgan Hill to invoke the rental dispute hearing process under chapter 5.36 of the Morgan Hill Municipal Code.  
 Attach is a written summary of the details for our petition and attach signatures of effected tenants as required.

**PROPERTY OWNER - Petition for Hearing**

(Provide the following if it applies to your petition)

**Rent Increase:**

Computation of Consumer Price Index for the Months Prior to Notice (City staff can assist).  
 Other information: Please see Supporting documentation attached hereto.

**Request for Hearing:**

We/I hereby request the City of Morgan Hill to invoke the rental dispute hearing process under chapter 5.36 of the Morgan Hill Municipal Code.  
 Attached is a written summary of the details for our petition.

EXPLANATION AND DOCUMENTATION IN SUPPORT OF APPLICATION FOR  
DISCRETIONARY RENT INCREASE APPLICATION AND  
REQUEST FOR COMPENSATION

SUBMITTED TO THE CITY OF MORGAN HILL  
MOBILEHOME PARK RENT REVIEW BOARD

BY:

WINDMILL MOBILE ESTATES  
575 San Pedro Avenue  
Morgan Hill, CA 95037  
APPLICANT

Dated: October 8, 2007

HART, KING & COLDREN

By:



Robert S. Coldren  
C. William Dahlin  
Jason L. Pyrz  
Attorneys for Applicant,  
WINDMILL MOBILE ESTATES

## 1. Introduction

The owner of Windmill Mobile Estates (“the Park”), PW Property Investments, LLC., a California Limited Liability Corporation, hereafter referred to as “Windmill,” submits this Application for a General Rent Increase to the City of Morgan Hill Commission on Rents under the City of Morgan Hill Municipal Code Chapter 5.36 (the “Ordinance”) to receive a just and reasonable return on the Park property.

- Windmill is entitled to a rent increase of \$192.55 per month, per space to prevent a taking of Windmill’s property;
- Windmill is entitled to a minimum average rent increase of \$81.86 per space, per month, applying the preferred methodology adopted by the City under the Ordinance and Guidelines for considering Discretionary Rent Increase Applications;

The Park requests a \$192.55 per month, per space rent increase, effective on or about January 1, 2008, for all 29 spaces in the Park not subject to long-term leases. This increase will allow average rents to rise to approximately \$568 per month<sup>1</sup>, which represents the lowest rent levels which can constitutionally be imposed on Windmill.

The stated purposes of the Ordinance in Section 5.36.010 is to protect residents against “excessive” rents and to protect the investment of the mobile home owner, while allowing the park owner a “fair return.” In addition, the City’s application of the Ordinance must not cause a regulatory taking. A taking will occur where the City’s application of the Ordinance causes Windmill to effectively deed its property or bear a burden out of proportion to its share as set forth in the US Supreme Court case of *Penn Central Trans. Co. v. New York City*, (1978) 438 U.S. 104 (“*Penn Central*”).

The City is advised that the existing regulated rent structure of the Park has become unconstitutional because it no longer advances a legitimate state purpose. The City has maintained rents far below those levels necessary to protect against excessive rents and protect the investment of the mobile home owner. Windmill seeks to increase rents, by this

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<sup>1</sup> With the exception of three spaces currently subject to monthly rents of between \$587 and \$619, the vast majority of spaces not on long-term leases are subject to monthly rents between \$300 and \$350. Windmill is amenable to a solution that would bring all space rents to a level more in-line with those currently paying the higher rents in the \$600 per month range.

application, to the minimum level necessary to avoid a taking of Windmill' property based on rent regulation which does not substantially advance the stated purposes of the Ordinance or any other legitimate state interest.

## **2. Demand For State Compensation For A Taking**

The City is advised by Windmill that this application is a request for "state compensation" for a taking within the meaning of *Williamson County Regional Planning Com. v. Hamilton Bank* (1985) 473 U.S. 172, 105 S. Ct. 3108. The City is further advised that without the increase, its application of the Ordinance to Windmill will not substantially advance a legitimate state interest and require the Park owner to bear a burden that should be borne by the community as a whole. See, *Armstrong v. United States*, 364 U.S. 40, 49 (1960); *Penn Central, supra*.

## **3. A \$192.55 Rent Increase Is Necessary to Avoid An Unconstitutional Application of the Ordinance**

### **A. Average Rents Must Increase to at a minimum \$568 to Avoid A Taking**

Windmill requests a rent increase of \$192.55. An increase of that amount would raise average rents in the Park to \$568 per month, per space. This amount does not come close to the market rent, which is much, much higher .

Mobilehome space rents in the City have, since 1982, been subject to regulation under the Ordinance which states that subject to limited exceptions the maximum annual increase that may be imposed on the base rent for any non-exempt space rent is a percentage of the Consumer Price Index ("CPI")<sup>2</sup>. The effect of this regulation, over time, has been to render rent levels substantially below those levels that can be justified under the purposes purported to be advanced by the Ordinance.

As stated above, the purposes stated in Ordinance in Section 5.36.010 are to protect residents against "excessive" rents and to protect the investment of the mobile home owner, while allowing the park owner a "fair return." The Ordinance is not designed to function as a private rent subsidy program, nor could it constitutionally serve that purpose. *Tahoe Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency* (2002) 535 U.S. 302, 122 S.Ct. 1465. An unconstitutional taking of property occurs where the regulation unfairly places a burden on one property owner that should be borne by society as a whole. *Id.*, quoting *Armstrong v. United States* 364 U.S. 40 (1960) (other citations omitted).

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<sup>2</sup> The Ordinance allows 75% of the CPI for an annual rent adjustment.

Mobilehome rent control generally, and the Ordinance particularly is designed to address potential abuse of the situation where undue leverage is exerted by the Park Owner in setting rents due to the unique aspects of mobilehome residency:

The immobility of the mobilehome, the investment of the mobilehome owner, and restriction on mobilehome spaces, has sometimes led to what has been perceived as an economic imbalance of power in favor of mobilehome park owners (citation) that has in turn led many California cities to adopt mobilehome rent control ordinances (citation).

*Galland v. City of Clovis* (2001) 24 Cal. 4th 1003 , 1010, citing Baar, The Right to Sell the "Im"mobile Manufactured Home in Its Rent-controlled Space in the "Im"MOBILE HOME PARK: Valid Regulation or Unconstitutional Taking? (1992) 24 Urb.Law. 157, 158, fn. 13.

In this case, the stated purpose of the Ordinance is to prevent "excessive" rents that result from a purported inequality in bargaining position. Windmill demonstrates in this application that rent levels in the Park should be at an average of at least \$568 per space. This result is consistent with the complete absence of the factors that are alleged to cause an unequal bargaining position, a shortage of available spaces and the cost of moving mobile homes. Regulation of rents in a fashion that holds rents below that level would not have a "reasonable relationship" to the public purposes of the Ordinance and thus would result in a taking.

##### **5. The City Must Apply A Takings Analysis to Windmill's Rent Increase Application**

The Ordinance purports to assure the park owner a "fair return" and maintains that such a return is available through the mechanism provided by Sections 5.36.250 through 5.36.320 of the Ordinance. See Ordinance §5.36.010.E. As set forth above, Windmill's Application is predicated on showing that an average rent increase of \$192.55 is necessary in order to avoid an unconstitutional regulatory taking.

The "fair return" standard arises (in general) from due process considerations and thus does not truly address potential takings. See *Kavanau v. Santa Monica Rent Control Board*, 16 Cal. 4th 761 (1997). In addition, the "fair return" due process analysis simply does not address Windmill's concern that unless the application is granted the Ordinance will cause a taking.

**6. A Rent Increase To An Average of \$568 is Necessary to Preserve Windmill's Right To Equal Protection Under the Law**

The City has not adopted rent control for housing other than mobilehome parks. In addition, California has adopted legislation banning vacancy control for all forms of rental housing other than mobilehome parks. As explained above, the rationale for differential treatment of mobilehome parks is the "immobility of the mobilehome, the investment of the mobilehome owner, and restriction on mobilehome spaces, has sometimes led to what has been perceived as an economic imbalance of power in favor of mobilehome park owners . . ." *Galland, supra*.

In considering Windmill's rent increase application, the City must consider this constitutional limitation on the factual foundation and basis for rent regulation. In other words, the City cannot constitutionally pick mobilehome park owners to bear the burden of providing affordable housing while other rental property owners are not required to bear any part of that burden. Such regulation would violate Windmill's equal protection rights. *Hays v. Wood* (1979) 25 Cal. 3d 772, 790 (the Legislature may not single out a group for regulation "wholly at its whim").

If the City regulates the Park's rents beyond the level necessary to meet the purposes of protecting residents against "unreasonable" rents that could arise from the unique characteristics of a mobilehome tenancy, it is singling out Windmill to pay for an affordable housing program in violation of Windmill's rights to equal protection under the law.

**7. A Rent Increase of \$81.86 Per Month, Per Space Is Necessary To Meet the "Fair Return" Standard Adopted Under the Ordinance**

The Ordinance and Guidelines adopt a presumption that a "fair return" can be established by assuring the "net operating income will be increased at the rate of forty percent of the increase in the CPI over the base year." (Ordinance §5.36.310.A) This methodology is commonly referred to as the Maintenance of Net Operating Income or MNOI methodology. The underlying concept for this theory/methodology, is that it provides for a rent increase to the amount necessary to allow the park owner to earn the same return, inflation adjusted, as was earned in the base year of 1981.

Applying the MNOI methodology as directed in the Ordinance, Windmill is entitled to a rent increase of \$81.86 per space. That methodology does not reflect the true impact of inflation because the ordinance only accounts for a portion of the change in the CPI

Windmill does not have actual data available to calculate the actual Net Operating Income of the Park for the base year. (See Declaration of Peter Wang, Paragraph 2). As a result, Windmill has estimated the base year Net Operating Income, as authorized under the

Ordinance. (See Section 5.36.290.B.2.) (See Attachment A, pages 23-26, which show the calculations.)

For many years, the residents of Windmill have been the beneficiary of a “windfall.” The rent increase required under the MNOI methodology will not allow Windmill to recover that windfall, but may, prevent it from continuing on the present scale.

## **8. The City’s MNOI Methodology Does Not Meet the Ordinance’s “Fair Return” Standard**

Windmill submits the City’s MNOI methodology because it is “mandatory” under the Ordinance. However, Windmill contends that, even if properly applied, the methodology does not allow for a sufficient rent increase. As discussed above, the proper application of any “fair return” standard does not address the question of whether the application of the Ordinance by the City under that standard causes a taking of the park owner’s property.

In addition, the MNOI methodology is not sufficient to allow a “fair return” because, over the long term, a park owner is entitled to a real increase in return. The California Supreme Court in *Fisher v. City of Berkeley* (1984) 37 Cal. 3d 644 held that, over time, simply maintaining profits is not enough. Park owners must be allowed to earn a return “that is generally commensurate with returns on investments in other enterprises having comparable risks . . .” *Id.* at 713. The City’s MNOI methodology allows the park owner to increase rents at a rate consistent with only a portion of the increase in the CPI, and the result does not come close to maintaining net operating income.

This level of return bears no relationship to the kind of returns experienced by other property owners bearing a similar risk. The result of applying the City’s mandatory MNOI methodology actually results in a decrease in net operating income.

## **9. Windmill Is Entitled To Recover the Costs of This Application**

In advance of the hearing, Windmill will submit a summary of the costs incurred and to be incurred in the submission of its application and requests an additional rent increase to recover that cost. Windmill is entitled to recover the cost of bringing this application as an ordinary, necessary cost of doing business. *Galland v. City of Clovis* (2001) 24 Cal. 4th 1003, 1040. The City’s MNOI methodology does not adequately address this issue because the comparison year (2006) does not include the vast majority of the costs incurred to bring the application, which have been (and will be) incurred in calendar year 2007. Because rent increase applications look backward at expenses, it is typically impossible for the “comparison year” to reflect the cost of the rent increase application. Thus, without a separate mechanism to recover the cost, the park owner is denied a fair return.

1 I, Peter Wang, declare:

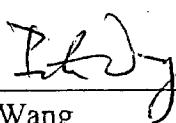
2 1. I am a principal of PW Property Investments, LLC, the owner of Windmill  
3 Mobile Estates (the "Park"). I have been associated with the Park in that capacity since  
4 the LLC I control acquired the park in 2005.

5 2. I do not have the records needed to calculate actual Net Operating Income of  
6 the Park for the base year as defined in the City of Morgan Hill's Rent Control  
7 Ordinance. The report of the expert calculated base year No. 1 using the results from the  
8 park since I acquired it as contemplated by the Ordinance.

9 3. I have reviewed the Petition for Hearing/Space rent review and supporting  
10 documents. I believe that the representations made therein are true and correct.

11  
12 I declare under penalty of perjury under the laws of the State of California that the  
13 foregoing is true and correct.

14  
15 Executed on October 10, 2007, at Morgan Hill, California.

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19 Peter Wang  
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***FAIR RATE OF RETURN ON INVESTMENT***  
***AND***  
***RENT ADJUSTMENTS BASED ON 2006 AND 2007 FINANCIAL DATA***  
***FOR***  
***WINDMILL MOBILE ESTATES***

*Submitted by:*

*Richard S. Fabrikant MBA, Ph.D.  
Business/Financial Economist*

*on*

*September 10, 2007*

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Richard Fabrikant, MBA, PhD

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# A FAIR RATE OF RETURN ON INVESTMENT

AND

## RENT ADJUSTMENTS

### WINDMILL MOBILE ESTATES

#### ***EXECUTIVE SUMMARY***

1. At a minimum, the *nominal* fair rate of return on the capital invested in Windmill Mobile Estates (“Windmill”) is 11.84 percent. Adjusted for inflation the *real* fair rate of return is 9.34 percent.
2. The nominal fair rate of return was derived using two fundamentally accepted economic approaches, which include analyzing the rates of return for alternative comparative investments available in public financial markets and the calculation of a risk premium for Windmill and adding it to a risk free rate represented by the 20-year Treasury bond.
3. Two analytic approaches founded on economic and financial principals are developed to determine rent adjustments based on a fair rate of return. The first analytic approach applies an inflation-adjusted dollar value analysis by aligning all data to comparable current dollar values. In the second approach for determining a rent adjustment, the future stream of net operating income for the years 2007 – 2026 plus a final inflation adjusted value for Windmill as of 2026 are analyzed. By applying the present value internal rate of return mathematical approach the rent increase necessary to achieve the required fair rate of return of 11.84 percent is achieved. The rent adjustments resulting from these methods are

Description of Rent Adjustment Methods	Rent Increase Per Month Per Space
1. Real Rate of Return based on 2006 Data	\$127.86
2. Real Rate of Return based on 2006 Data and Updated Property Tax Assessment	\$148.73
3. Look Forward Analysis – Internal Rate of Return	\$192.55

4. The Maintenance of Net Operating Income (MNOI) method for the determination of a rent increase is also applied, although it is not based on any economic or financial principals. The methodology for applying the MNOI approach is prescribed in the Morgan Hill Municipal Code, Chapter 5.36, Paragraphs 5.36.050, 5.36.270, 5.36.290, 5.36.300 and 5.36.310. The monthly rent adjustment when applying this method is \$81.86 per space.

5. It is proven mathematically that if Net Operating Income (NOI) is constrained to increase at a fraction of the inflation rate then the *real* value of NOI will approach zero at some time in the future. Furthermore, the higher the inflation rate and the smaller the fraction of allowable inflationary increases, the faster *real* NOI will approach zero. The mathematical proof is provided to demonstrate the economic and financial inconsistency of applying the Maintenance of Net Operating Income method in determining a fair return on investment.
6. In this study, the financial methods applied for determining a fair rate of return on Windmill and in deriving the necessary rent adjustments, consistently adhere to contemporary financial theory and investment analysis. The capital investment made in August 2005 is adjusted for inflation such that yearly dollar returns and the value of the investments are accounted for in current dollars. Where appropriate the rates of return reflect the business and financial risk premiums connected to the management and ownership of Windmill. The analysis is carried out independent of financing arrangements. Interest expense, depreciation, amortization and income taxes are not included in determining the net income generated from the investment.

Respectfully submitted by,

Richard S. Fabrikant, MBA, PhD  
Business/Financial Economist  
September 10, 2007

Richard S. Fabrikant, MBA, PhD  
Business/Financial Economist

RECEIVED  
9-11-07

September 10, 2007

William Dahlin, Attorney at Law  
Hart, King & Coldren  
200 Sandpointe, 4<sup>th</sup> Floor  
Santa Anna, CA 92707

Re: Windmill Mobile Estates

Dear William,

Please find enclosed the completed study entitled "Fair Rate of Return on Investment and Rent Adjustments Based on 2006 and 2007 Financial Data for Windmill Mobile Estates". I have included in the analysis all the additional information received last month. Consequently, the estimated recommended rent adjustments have been revised from my preliminary results sent to you on July 6, 2007.

If you have any questions in connection with the study please give me a call.

Best regards,

*Richard Fabrikant*

Richard Fabrikant

***FAIR RATE OF RETURN ON INVESTMENT***  
***AND***  
***RENT ADJUSTMENTS BASED ON 2006 AND 2007 FINANCIAL DATA***  
***FOR***  
***WINDMILL MOBILE ESTATES***

*Submitted by:*

*Richard S. Fabrikant MBA, Ph.D.*  
*Business/Financial Economist*

*on*

*September 10, 2007*

# **A FAIR RATE OF RETURN ON INVESTMENT**

**AND**

**RENT ADJUSTMENTS**

**WINDMILL MOBILE ESTATES**

## ***PART I. INTRODUCTION AND BACKGROUND***

### **A. Introduction**

Windmill Mobile Estates ("Windmill") is located at 575 East San Pedro Avenue, Morgan Hill, California. It is owned by PW Property Investments, LLC ("Parkowner"). The Parkowner purchased Windmill on August 5, 2005. At the present, there are 90 mobile home spaces. Park facilities are shared equally by all tenants. The Parkowner requested this study in order to determine an appropriate rent increase that would provide it with a fair rate of return on its investment.

In addition to the fair rate of return and rent increase analysis, a discussion is provided on the Maintenance of Net Operating Income methodology in determining a fair rent increase, as provided for in the Morgan Hill Municipal Code Chapter 5.36, Mobile Home Park Rents, Paragraphs 5.36.050, 5.36.270, 5.36.290, 5.36.300 and 5.36.310. (See Appendix 1.2 for the Morgan Hill Municipal Code, Chapter 5.36). A mathematical proof demonstrating that given a positive inflation rate the constraints put forward in Paragraph 5.36.310 will cause *real* net operating income to approach zero.

### **B. Contemporary Financial Theory and Rate of Return Investment Analysis**

Modern financial theory and investment analysis emphasizes the role of expectations in valuing assets and determining appropriate rates of return. For example, one continually reads that stocks are valued based on future (or expected) earnings. Along with the emphasis on expectations comes the importance of factoring in inflation. All financial markets have become exceptionally sensitive to the impacts of inflation on the rate of return on investment. The mere hint of inflation or that the Federal Reserve may raise interest rates immediately sends bond prices falling causing market interest rates to rise. Thus, to properly determine the rate of return for an investment, it is essential to account for the impact of inflation on returns to the particular investment in question.

The market rate of return on any given type of investment is a dynamic concept in that a multitude of variables are factored into its determination at any given period. To presume that at

the time the Ordinance was adopted any given mobilehome park was achieving a fair return, without empirically testing that assumption, is without basis. Furthermore, to presume that a rate of return 20 years ago should be accepted today as an appropriate rate of return is to fail to consider supply and demand conditions of labor, capital and land, improvements in technology, inflationary expectations, government regulation and growth of financial markets. Consequently, when considering the concept and derivation of a fair rate of return one must look at contemporary and future economic activity and not confine the analysis to the past. If investors simply considered historic rates of return as given, the flow of capital would remain static, with funds going to the same types of investments as they did years ago. Clearly this is not what occurs, for if it did economic growth in this country would be stifled.

In comparing the economic fundamentals of investment alternatives, it is essential to analyze each investment opportunity independent of the manner in which that investment may be financed. It is the economic return on the investment that institutes the possibility of financing and not the other way around. For example, if an investment yield was 10 percent one would not take out a 15 percent loan to finance it. Furthermore, the availability of financing depends greatly on the individual's access to financial markets. This factor has nothing to do with the inherent returns on the investment. Thus in determining comparative rates of return on investment, financing arrangements are not to be included.

With the ever-increasing complexity of the tax laws and accounting structures, it becomes an impossibility to analyze comparative investments on a post tax advantaged basis. One person's tax advantage can easily be another person's tax problem. Modern analysts focus their attention on earnings before interest, tax, depreciation and amortization (EBITDA). By doing so financial analysts can compare investment alternatives independent of the way they are financed, the numerous accounting practices used for determining depreciation and amortization, and the issues accompanying individual and enterprise tax strategies.

It is a matter of mathematical certainty that the *real*, or inflation adjusted, net operating income will decline if revenues are increased at a fraction of the inflation rate and expenses increase at the inflation rate. Given a sufficiently long time period the *real* rate of return on investment will approach zero if net operating income does not increase at the inflation rate. A rational investor faced with a declining *real* net operating income would, all other things being equal, usually avoid such an investment and seek substitute opportunities.

In this study the financial methods applied, for determining a fair rate of return on the investment in Windmill and for the derivation of rent adjustments, adhere directly to contemporary financial theory and investment analysis. The analysis is carried out independent of the financing arrangements. Interest expense, depreciation, amortization and taxes are not included in determining the net income generated from the investment because (i) it is consistent with modern financial theory to eliminate such factors for comparison purposes and (ii) there is no data available to allow comparison of rates of return in other investments if those factors are

included. In deriving a fair rate of return on the investment, expectations connected with inflation and economic risks are considered. The calculations for rent adjustments are carried out in two ways. The first approach applies a return on purchase price analysis for deriving the rent adjustment. The second method applies a twenty-year look-forward approach, taking into consideration the inflationary increase in property values, revenues and expenses in determining the appropriate rent increase. Finally the third approach, which is not based on economic or financial principals, is the Maintenance of Net Operating Income Method as structured in the Morgan Hill Municipal Code, Chapter 5.36 ("Ordinance"), Paragraphs 5.36.300 and 5.36.310.

### **C. Structure of Report**

This report provides an economic framework for the determination of rent adjustments based on the criteria of a fair return on investment. Financial data is drawn from the income statement for the twelve months ending December 31, 2006 and the six months ending June 30, 2007.

The body of the report contains eight parts. Part I includes this introduction and background information. A discussion is presented in Part II on the economic framework for the derivation of a fair rate of return on investment. In Part III comparative industry and financial market data are used to derive a fair rate of return on investment for Windmill. In Part IV a rent adjustment for January 1, 2008 is derived based on the 2006 and 2007 revenues and expenses, the inflation adjusted 2005 investment cost for Windmill and the derived *real* rate of return. A look-forward method for determining the 2008 rent adjustment is presented in Part V that takes into account future inflationary expectations of the value of Windmill, projected net operating income and the *nominal* fair rate of return on investment. The calculation for a rent adjustment using the Maintenance of Net Operating Income ("MNOI") method is carried out in Part VI. A critical discussion of the economic and financial flaws in utilizing the MNOI method is presented in Part VII. Included in Part VII is the mathematical proof demonstrating the impacts of inflation on net operating income resulting from the restrictions in applying the MNOI method. Conclusions and a summary of findings are presented in Part VIII. A listing of sources of information is at the end of the report.

## PART II. THE ECONOMICS OF INFLATION, RISK AND A FAIR RATE OF RETURN

### A. Introduction

Individuals commit funds to particular investments based on what they perceive will be the economic returns to those investments, the risks connected with achieving those returns, the preservation of their capital, and their expectations regarding the future inflation rate. The rate of return on investment is a standard measure used to rank investment opportunities for determining the allocation of funds in capital markets. In its simplest form, the rate of return is defined as the average annual dollar amount gained from the investment divided by the funds committed. A fair rate of return on a prospective investment is that rate of return, which at a minimum provides the investor with an equivalent market rate of return, after taking into account the unique risks connected with that investment.

Future expectations of inflation and investment performance are fundamental in determining market rates of return, and in turn, fair rates of return. The greater the expected future inflation rates the higher the benchmark rate of return. After taking into account inflation, investment comparisons can only be achieved by adjusting each investment for financial and business risk, since investors demand higher rates of return for higher risk investments.

#### 1. Understanding the Impact of Inflation on Rates of Return

Inflation is the positive rate of change in prices. Given a fixed income, purchasing power decreases as inflation increases. Income generated from an investment must rise at least as fast as inflation; otherwise the investor would continually lose purchasing power. Thus, the *real* return on an investment is the investor's gain in purchasing power after accounting for inflation. Alternatively, the *nominal* rate of return is the market rate of return unadjusted for inflation. For example, the *nominal* average annual interest rate of a 20-Year US Treasury during the first six months of 2007 was 4.99 percent. (See Appendix 2.1 for 20-Year US Treasury rates). The average inflation rate for the first six months of 2007 was 3.25 percent based on the U.S. Department of Labor CPI Index U.S. City Average – All Urban Consumers.<sup>1</sup> (See Appendix 2.2 for the CPI data). From this data the *real* rate of return on the 20-Year US Treasury bond is calculated as follows:

$$\text{Nominal} \\ \text{Interest Rate} - \text{Inflation Rate} = \text{Real Rate of Return}$$

$$\text{Average Jan. 07 – Jun. 07:} \quad 4.99\% \quad - \quad 3.25\% \quad = \quad 1.74\%$$

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<sup>1</sup> CPI for 12/31/06 = 201.8 and for 6/30/07 = 208.35

Over the longer term the *real* rate of return on the 20-Year US Treasury is based on future inflationary expectations. In an economic research report published by the Federal Reserve Bank of St. Louis the long term inflation rate is projected at 2.5 percent. (The article is found in Appendix 2.3). Consequently, if the 20-Year US Treasury is purchased today the average anticipated future real rate of return is 2.49 percent (4.99% - 2.5%).

The *real* rate of return is to be used when the data is fully adjusted for inflation. This is achieved by either discounting dollars invested and returns received back to the point in time that the investment was made, or inflating returns and investment to the present date. If both returns and invested capital contain inflationary components, then the *nominal* rate of return is to be used. (See Appendix 2.4 for a discussion on the theory of interest rates in "Principles of Corporate Finance", Richard A. Brealey and Stewart C. Myers, McGraw Hill, Chpt. 23, pp 543-547).

## 2. Financial Risk and Business Risks: Preservation of Capital

a. *Financial risk* is connected to the security of principal. Where it is almost certain that no loss of principal is inherent in the investment the financial risk approaches zero. The standard "risk free" investment is U.S. government notes and bonds. For the first half of 2007 the interest on 20-Year U.S. Long Term Treasury Bonds averaged 4.99 percent. Bonds with higher risk such as Collateralized Mortgage Obligations (CMOs) are approximately 1.19 percentage points higher than the risk free U.S. Treasury Bond obligation. Thus, an indirect investment in real property guaranteed by the U.S. government through its participating agencies would be approximately 6.18 percent for 2007.<sup>2</sup> Investing directly in real property, such as in Windmill, increases the financial risks connected with the security of principal over that of market traded government guaranteed CMOs. To induce investors to take additional risks a higher rate of return must be made possible, otherwise, the investor would allocate funds solely for the purchase of CMOs.

b. *Business risk* is connected with the ability of the investment vehicle to generate and maintain the stream of future net income necessary to achieve a given rate of return. The business risk directly associated with owning a Triple A corporate bond is relatively low; the reason being that bonds offer a guaranteed interest rate over time. This is not the case with developing and owning real property. Expenses may rise faster than anticipated

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<sup>2</sup> The underlying mortgage backed securities (MBS) which are contained in Collateralized Mortgage Obligations (CMO) are backed by the full faith and credit of the U.S. Government through its issuing agencies, including Ginnie Mae, Freddie Mac and Fannie Mae.

and revenues may not be achieved at the rate anticipated, thus reducing net income and the return on investment. Somewhat unique to real property investments are the following business and financial impacts:

- i) The property may necessitate infusions of capital further reducing the return on the initial investment. Such capital costs may be connected to the improvement of roads, property access and security systems, sewer installations, utility installations and metering, lighting and new facilities in order to remain market competitive.
- ii) Property owners may become involved in litigation resulting in uncompensated attorney fees, damages and settlement costs.
- iii) Revenues decline if vacancies rise and rents are lost due to delays connected with the eviction of non-paying tenants.
- iv) Reductions of rents caused by unanticipated market changes such as natural disasters, increases in transportation costs, government regulation, rent control and/or local bank lending policies are not uncommon. (In Appendix 2.5 page 3, the article "The January 17, 1994 Northridge, CA Earthquake" describes the impact of the Northridge earthquake on mobile homes and mobilehome parks).
- v) In mobilehome parks, deterioration or obsolescence of the tenant owned mobilehomes may cause the underlying space to become less desirable in the market place.

To reflect the above business risks associated with the holding of real property the required rate of return must be incremented above that of the *risk free* rate of return plus the *financial* risk rate premium.

### **PART III. DETERMINATION OF A FAIR RATE OF RETURN ON INVESTMENT FOR WINDMILL MOBILE ESTATES**

#### **A. Introduction**

Two methods are considered for determining a fair rate of return on the Parkowner's investment in Windmill. The first method is termed an opportunity cost comparative method. This entails the analysis of market rates of return for property investments, which are viable alternatives for an on-going investment in Windmill. The second method consists of deriving a rate of return by adding to the risk free rate a risk factor adjustment that reflects the business and financial risks of owning Windmill.

In choosing these methods for determining a fair rate of return on investment in a mobilehome park in Morgan Hill it is important to understand that there are no published data sets, articles or government agency reports that specifically provide Morgan Hill rates of return on mobilehome parks, nor do such data sets exist on a regional, statewide or national basis. Further, to carry out a fair rate of return analysis on mobilehome parks in Morgan Hill it would be necessary to know the net income stream for each park along with the invested capital in the park. Given that individual park owner's financial information is highly proprietary and in many cases nonexistent for certain years, it is impossible to assemble such data. Even if such information could be obtained for all mobilehome parks in Morgan Hill, it would not necessarily establish a fair rate of return, because all of those mobilehome parks have been subject to rent controls for many years. Finally, even on a state or national basis published rate of return information specific to mobilehome parks is totally lacking.<sup>3</sup>

*Given the available data the analysis below will show that the nominal fair rate of return is 11.84 percent and the inflation adjusted real fair rate of return is 9.34 percent.*

#### **B. Opportunity Cost Comparative Method**

An excellent comparative source for analyzing rates of return on investment to real property are publicly traded Real Estate Investment Trusts ("REITs"). Individual properties, such as Windmill Mobile Estates, do not enjoy the liquidity or diversification advantages of a REIT. Furthermore, there is the time, worry, effort and concern property owners sustain in managing their properties. To compensate for these factors a greater potential long run return on investment

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<sup>3</sup> RealtyRates.com publishes an Investor Survey that includes a table entitled "Current & Historical Cap Rate Indices". One category in the table is MH/RV Park Camping, which shows that for 2006 the cap rate is 9.76 percent. The table can be found in Appendix 3.1. Note that Cap Rates are going-in rates and not long term rates of return. Cap Rates also fail to take into account inflationary expectations.

would be required by an investor owning and managing a single property as compared to the purchase of REIT shares.

The formula for deriving the long-term rate of return on investment based on dividend distributions on an investment is as follows:

$$r = D + g$$

Where:

$r$  = Return investors require from similar investments

$D$  = Dividend yield

$g$  = Expected rate of dividend growth

(See Appendix 3.2 and 3.3 "Principles of Corporate Finance", Richard A. Brealy and Stewart C. Myers, McGraw Hill, Chapter 4, Pp 49-55 and Chapter 7, Pp 131-143.)

Dividend yield is defined as the dividend per share divided by the price of that share. For example, if the annual dividend is one dollar and the price of the stock is ten dollars, the dividend yield is 10 percent ( $\$1.00/\$10.00$ ). In this study the expected rate of dividend growth is estimated by the average annual increase in dividend yield over the past five years.<sup>4</sup>

Four publicly traded REITs that are engaged in the acquisition, development, renovation and operation of manufactured home communities are American Land Lease, Inc., Equity Lifestyle Properties, Inc., Sun Communities and United Mobile Homes Inc. Equity Lifestyles Properties recently changed its name from Manufactured Home Communities. The dividend yield for the trailing twelve months as of June 30, 2007 along with the 5 year growth rate for each REIT is shown in Table 1 below. By adding the recent dividend yield to the expected rate of dividend growth, as represented by the previous 5 years growth rate, results in a market anticipated rate of return on an investment in manufactured home communities.

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<sup>4</sup> The estimation of dividend growth rate in this study is a proxy for the alternative theoretical measure of expected rate of dividend growth determined as follows: plowback ratio times the return on equity. The plowback ratio is defined as the reinvestment rate of the firm, or that proportion of the return on equity reinvested in the firm. See "Principles of Corporate Finance", Richard A. Brealy and Stewart C. Myers, McGraw Hill, Chpt. 4, p 53.

**TABLE 1**  
**Dividend Yield, Growth Rate and Expected Market Rate of Return**

REIT	Trailing 12 Months Dividend Yield as of June 2007	5 Year Dividend Yield Growth Rate	Expected Market Rate of Return
American Land Lease	4.18%	4.70%	8.88%
Equity Lifestyle Properties	1.15%	5.90%	7.05%
Sun Communities	8.49%	6.80%	15.29%
United Mobile Homes	7.02%	6.00%	13.02%

Source: <http://www.moneycentral.msn.com/investor>

The average of the above expected market rate of return over the sampled REITs' is 11.06 percent, which provides a market expectation for the *nominal* rate of return in investments connected with the ownership and operation of mobile home communities. Subtracting the anticipated long run inflation rate of 2.5 percent from 11.06 percent yields a *real* rate of return of 8.56 percent.

An alternative method of deriving the return on an investment in a REIT is to analyze the rise in the value of its stock over a specific period of time. For this analysis the five year period dating from June 30, 2002 through June 30, 2007, comparable to the dividend yield analysis above, is chosen. To smooth out the daily fluctuations in stock price a three month trailing average of stock prices was calculated for the beginning and ending dates. The historic share price for each REIT in the sample is adjusted for stock splits and dividend distributions. The annual rate of return is then derived by using the internal rate of return mathematical calculation. In Table 2 below the share data for each individual REIT is presented along with the calculated annual internal rate of return.

**TABLE 2**  
**Adjusted Stock Appreciation and Annual Internal Rate of Return**

REIT	Trailing 3 Months Stock Price as of June 30, 2002	Trailing 3 Months Stock Price as of June 30, 2007	Annual Internal Rate of Return
American Land Lease	\$ 11.69	\$ 25.16	16.56%
Equity Lifestyle Properties	\$ 31.37	\$ 52.67	10.92%
Sun Communities	\$ 28.69	\$ 29.87	.81%
United Mobile Homes	\$ 9.58	\$ 14.24	8.25%

Source: <http://finance.yahoo.com/q>

The average internal rate of return for all REITs in the sample is 9.14 percent. If Sun Communities is excluded from the REIT sample the average internal rate of return is 11.91 percent. The rationale for considering the exclusion of Sun Communities is that in January 2004 the Securities and Exchange Commission opened up an inquiry into Sun Communities' accounting procedures. The SEC inquiry stemmed from accounting issues dating back to 2001. While the SEC inquiry did not impinge on Sun Communities' on-going operations and consequently its dividend distributions, it did have a negative effect on the growth of its stock value. It was not until February of 2006 that the inquiry and potential financial penalties were resolved with the SEC's acceptance of a settlement offer from Sun Communities.

Of the four REIT's in the sample, Equity Lifestyle has the largest percentage of California mobile home communities. In 2006 approximately 18.5 percent of its revenue was generated from 45 mobile home communities in California. The proportion of California properties in the portfolios of the other three REITs is considerably lower than that found in Equity Lifestyle Properties. Consequently, given the range in average internal rates of return between 9.14 and 11.91, the selection of Equity Lifestyle Properties' internal rate of return of 10.92, as representative of the adjusted stock appreciation method for determining a rate of return, is appropriate.

**In summary, by taking the average of the rate of returns drawn from the comparative REIT data and the two methods for determining a market fair rate of return on investment the deemed *nominal* fair rate of return is 10.99 percent,  $\{(11.06\%+10.92\%)/2\}$ , and the *real* rate of return 8.49 percent.**

### **C. Fair Rate of Return Derived from the Risk Free Rate of Return**

As an alternative, a fair rate of return for a given investment can also be derived by adding a risk premium to a risk free rate of return on investment. The "risk premium" is that amount of additional return on investment necessary to compensate the investor for unique business, financial and general market risks connected with the specific investment.

In the Partnership Profiles report entitled "2007 Rate of Return Study, Publicly-Held Real Estate Limited Partnerships and Real Estate Investment Trusts, risk premiums were calculated for REIT investments. (See Appendix 3.4 for the relevant pages in the Partnership Profiles' study). The 20-year Treasury bond, a generally accepted measure for determining the risk free rate was used to determine the average risk free return for a 20, 25, 30 and 34 year period within the 1972 – 2006 data set. REIT average rates of return were drawn from the same periods. By subtracting the risk free rate from the REIT rates of return, the risk premium is derived. The results reported by Partnership Profiles are as follows:

<u>Description Of Average Return For:</u>	<u>Risk Premium</u>
Last 20 years	7.7%
Last 25 years	8.3%
Last 30 years	8.7%
Last 34 years	7.6%

Real Estate Limited Partnerships (RELPs) are a higher risk investment than REITs. Unlike REITs, The higher business and financial risks associated with RELPs are typically attributed to less diversification in property portfolios, no government requirement to distribute income, narrower financial markets for the conversion of RELP unit ownership to cash and less depth of professional management.

The Real Estate Limited Partnership (RELP) data set in the Partnership Profiles' report covers the 13 year period, 1994-2006. In the reported data over the period 1994-2006 period, equivalent maturity treasury bonds averaged a 5.8 percent return compared to the RELP return of 20.1 percent. The implied risk premium for this type of real estate investment is thus 14.3 percent (20.1% - 5.8 percent).<sup>5</sup>

In a study carried out by Michael Annin, CFA of Ibbotson Associates, the risk premium of a diversified stock portfolio (Standard & Poors 500) over that of 30-Year Government bonds was found to be 7.1 percent. Mr. Annin's calculation of the risk premium was carried out using data from 1926 through 1996. An update of the Annin taking data from 1926 – 2004 indicates a risk premium of 6.57 percent.<sup>6</sup>

In general, ownership in Windmill Mobile Estates is subject to business and financial risks greater than that of REITs' and the S&P 500 diversified portfolio, but less than that of the RELP findings. Consequently, the selection of a risk premium taken over the 34 year period of the REIT study is the most conservative approach.

**To derive a fair rate of return using the risk premium method the average 2007 20-year US Treasury yield of 4.99 percent is added to the long term risk premium for real estate of 7.7 percent resulting in a fair rate of return of 12.69 percent. The calculation is as follows:**

	20-year Treasury Bond Rate	+	Risk Premium	=	Fair Rate of Return
First Half 2007:	4.99%	+	7.70%	=	12.69%

<sup>5</sup> "2007 Rate of Return Study, Partnership Profiles Inc. ", page 13.

<sup>6</sup> Calculated from Table II in "History and the Equity Risk Premium", by William N Goetzmann and Roger G. Ibbotson, Yale School of Management, October 18, 2005.

#### D. Conclusion and the Determination of a Fair Rate of Return

The two methods presented above for deriving a fair rate of return provide a floor for assessing the overall fair rate of return for Windmill Mobile Estates. This is based on the fact that in each case the most conservative approach for deriving a fair rate of return is chosen. To derive a single point estimate of the outcomes of the two methods a simple average is taken. The single point estimation outcome is presented in Table 3 below.

**TABLE 3**  
*Nominal Long-Run Fair Rate of Return*

Description	Rate of Return
Method 1: Comparative Rate of Return	10.99%
Method 2: Risk Premium Plus Risk Free Rate	12.69%
<b>Average Rate of Return Over All Methods</b>	<b>11.84%</b>

The *nominal* long-run fair rate of return is derived to be 11.84 percent. The *real* rate of return is derived by subtracting the long run inflation rate, anticipated to be approximately 2.5 percent, from the *nominal* rate of 11.84 percent, yielding a 9.34 percent *real* rate of return.

Additional support to the above results is found in the national “Investor Survey” carried out by RealtyRates.com.<sup>7</sup> The capitalization rate, which is the analog of the real rate, for the category Mobilhome and RV Parks was 9.45 percent for the second quarter of 2007. For all of 2006 the capitalization rate was 9.63 percent. The *nominal* rate analog is what RealtyRates’ refers to as the Pro-Forma Discount Rate. For the category of Manufacture Housing 100 units or less the minimum Pro-Forma Discount Rate for the 2<sup>nd</sup> Quarter 2007 is 13.27 percent and the average is 24.08 percent.

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<sup>7</sup> See <http://www.realtyrates.com>

## PART IV. FINANCIAL PERFORMANCE AND RENT ADJUSTMENT BASED ON THE REAL RATE OF RETURN

### A. Financial Performance

Windmill was purchased in August 2005. The first 12 month operating statement was for year ending December 31, 2006. A six month statement ending June 30, 2007 was also made available for this analysis. (See Appendix 4.1 for Windmill income statements). As discussed in Part I, B, depreciation, interest and income tax are not included in the calculation of net income when determining a fair return on investment. In Table 4 Income and Expense are shown for the full year 2006 and half year 2007 along with an annualized full year 2007. Depreciation is not included in the expense categories. Elimination of interest and income tax (LLC Tax) are also shown as well as account reconciliation adjustments for the annualized first half of 2007 data.

Rental Income for 2006 of \$559,241 and first half of 2007 of \$283,939 include revenues from rents and revenues from trash, sewer, water, electric and gas charges. It is noted that the rent roll for March of 2007 showed a total space rent for the month of 35,210.26, which includes a recent rental for space #6 at \$775 per month and a monthly rental of \$800 for space #77, which is rented to the owner. Including these most recent rents the average rent for the 90 spaces at the park as of March 2007 is \$391.23. (See Appendix 4.2 for the March 2007 rent roll).

Total expenses excluding depreciation for the year ending 2006 was \$487,193 and for the first half of 2007, \$268,622. When annualizing the first half of 2007 Total Expenses, excluding depreciation, amounts to \$537,245. Not included in the 2007 expenses is Property Tax which if based on 2006 would be \$30,749, but when adjusted for the recent reassessment as called for by the County of Santa Clara in its Notice of Enrollment of Escape Assessment (See Appendix 4.2) is \$53,292. The calculation for the new property tax amount is as follows:

Total Property Value as Corrected	\$4,310,000.00
Tax Rate per \$100	1.126
Tax Amount	\$48,530.60
Special Assessments	\$4,761.78
Total Property Tax	<u>\$53,292.38</u>

The increase in mortgage interest is most likely due to the timing of payments. However, since mortgage interest is adjusted out it does not impact the Adjusted Net Income that is used for determining the return on investment. Finally, the timing of management fees in 2007 has added an estimated \$15,204 to All Other expenses.

**TABLE 4**  
 Windmill Income and Expense Statement

	<b>End of Year 2006</b>	<b>First Half 2007</b>	<b>First Half 2007 Annualized</b>
<b>Revenue</b>			
Rental Income	559,241.38	283,939.37	567,878.74
All Other Income	1,391.68	116.37	232.74
<b>Total Revenue</b>	<b>560,633.06</b>	<b>284,055.74</b>	<b>568,111.48</b>
<b>Expenses</b>			
Mortgage Interest	164,802.18	97,794.31	195,588.62
Mortgage Int.-Castle	30,777.69	19,718.70	39,437.40
Mortgage Int.-Allegre	20,250.49	11,278.88	22,557.76
Property Taxes	30,995.58	33.02	66.04
Utilities	132,088.92	69,359.87	138,719.74
LLC Tax	1,600.00	3,300.00	6,600.00
All Other	106,678.28	67,137.48	134,274.96
<b>Total Expenses</b>	<b>487,193.14</b>	<b>268,622.26</b>	<b>537,244.52</b>
<b>Net Income before Depreciation</b>	<b>73,439.92</b>	<b>15,433.48</b>	<b>30,866.96</b>
<b>Adjustments</b>			
Mortgage Interest	164,802.18	97,794.31	195,588.62
Mortgage Int.-Castle	30,777.69	19,718.70	39,437.40
Mortgage Int.-Allegre	20,250.49	11,278.88	22,557.76
Total Interest	215,830.36	128,791.89	257,583.78
LLC Tax	1,600.00	3,300.00	6,600.00
<b>Total Adjustments</b>	<b>217,430.36</b>	<b>132,091.89</b>	<b>264,183.78</b>
<b>Net Income before Interest, Tax and Depreciation (NIBITD)</b>	<b>290,870.28</b>	<b>147,525.37</b>	<b>295,050.74</b>
Property Tax Adjustment per 2006 assessment			(30,749.00)
Property Management per 2006 fees.			<u>15,204.00</u>
<b>Adjusted Annualized 2007 NIBITD</b>			<b><u>279,505.74</u></b>

Net Income before depreciation for 2006 is \$73,439.92 as compared to \$15,433.38 for the first half of 2007 and \$30,867 for Annualized 2007, which does not include property tax. After netting out mortgage interest and LLC Tax Net Income before Interest, Tax and Depreciation (NIBITD) is \$290,870. For the first half of 2007 NIBITD is \$147,525 with an annual NIBITD for 2007 of \$295,051. By adjusting the annualized NIBITD 2007 result for Property Tax and Management Fees results in a comparable NIBITD to 2006 of \$279,506.

#### **B. Real Rate of Return on Investment and Rent Adjustment**

The market fair rate of return is derived at a particular point in time, embodying both inflationary expectations and underlying return on the present value of the investment. Since the investment was in August 2005 the value of the investment needs to be increased by the inflation rate, in order that the *real* present dollar return on the investment is comparable with the *real* fair market rate of return. (See Appendix 4.4 for a discussion on the importance of treating inflation consistently in "Principles of Corporate Finance", Richard A. Brealey and Stewart C. Myers, McGraw Hill, Chapter 6, Pp 96-98).

Presented in Table 5 and 5A is the rent adjustment calculation for Windmill Mobile Estates derived from the data set available. In Table 5, the rent adjustment is based on 2006 NIBITD and in Table 5A the rent adjustment is based on 2006 NIBITD reduced by the increase in property tax.

The starting point in this analysis is the *real* value of the investment as of June 2007 dollars, which is derived by adjusting the initial investment plus closing costs of \$4,314,019 by the increase in inflation. (See Appendix 4.5, Buyer's/Borrower's Settlement Statement). The calculation is developed in Table 4 below.

**TABLE 4**  
Inflation Adjusted Investment

CPI as of 8/30/05	203.0
CPI as of 6/30/07	216.12
<b>Percentage Change</b>	<b>6.46%</b>
Investment in Windmill 8/05/05 <sup>8</sup>	\$4,314,019
<b>Inflation Adjustment Factor</b>	<b>1.0646</b>
<b>Value of Investment in 6/30/07 Dollars</b>	<b>4,592,705</b>

<sup>8</sup> Purchase price is equal to the sales price of \$4,310,000 plus closing costs of \$4,019.03.

NIBITD for 2006 was \$290,870 and for 2007 Annualized NIBITD \$279,506. Using the higher 2006 NIBITD the *real* return on investment, (the *real* rate of return), is 6.33 percent, (Net Operating Income divided by the Real Value of Investment). Multiplying the investment amount of \$4,592,705 by the *real* fair rate of return of 9.34 percent derives the *real* net income of \$428,959 necessary to achieve a fair return on the Windmill Mobile Estates investment. The difference between the 2006 Net Income to Achieve a Fair Rate of Return on Investment and the Fair Return Net Income is \$138,088 which is the total shortfall in rent revenue.

The average increase in monthly rent per space necessary to overcome the short fall in revenue is \$127.86, (\$138,088 / 12 / 90 units). Given that the existing rents vary significantly and that there are tenant leases the distribution of the rent increase would not be uniform across tenants.

TABLE 5

Windmill Mobile Estates  
 Rent Adjustment: An Inflation-Adjusted Dollar Value Analysis

Value of Investment as of 6/30/2007	\$4,592,705
Net Adjusted Income as of 12/31/2006	290,870
Realized Net Return on Investment	6.33%
Fair Rate of Return for 2007	9.34%
Net Income to Achieve a Fair Rate of Return	\$428,958
Income Difference Between Actual and Fair Rate of Return Income	\$138,088
Number of Spaces	90
<b>Average Monthly Rent Adjustment Per Space</b>	<b>\$127.86</b>

Note 1. Calculations are carried out on a spreadsheet using double precision numeric. Results are rounded.

**In summary, a positive rent adjustment to achieve an increase in revenues of \$138,088 is necessary to allow a fair return on investment in the Windmill Mobile Estates property. The average rent adjustment per month per space is \$127.86.**

**If 2006 Net Adjusted Income is reduced to \$268,327 by the increase in property tax of \$22,326, (53,292-30,996) the Average Monthly Rent Adjustment per Space necessary to achieve a fair rate of return on investment would be \$148.73. The calculation is found in Table 5A.**

**TABLE 5A**

Windmill Mobile Estates  
Rent Adjustment: An Inflation-Adjusted Dollar Value Analysis with New Property Tax Assessment

Value of Investment as of 6/30/2007	\$4,592,705
Net Adjusted Income as of 12/31/2006 with Increase in Property Tax	\$268,327
Realized Net Return on Investment	5.85%
 Fair Rate of Return for 2007	9.34%
 Net Income to Achieve a Fair Rate of Return	\$428,959
 Income Difference Between Actual and Fair Rate of Return Income	\$160,632
 Number of Spaces	90
 <b>Average Monthly Rent Adjustment Per Space</b>	<b>\$148.73</b>

## PART V. RENT ADJUSTMENT – A LOOK FORWARD ANALYSIS

### **A. Introduction**

Financial projections provide insight regarding actions that require immediate attention. In this case the action is an increase in rent such that future returns will yield a fair rate of return on investment. A projection model may also be used to derive an understanding of the possible outcomes of given decisions. In the analysis presented below viable economic assumptions are made regarding the future inflation rate, increases in property value, yearly allowable income and expense increases based on Paragraph 5.36.260 C.1. c., and h.2. a, c and e of the Ordinance. The projections are carried out over a 20-year time horizon and a present value rent increase is then derived. The required rent increase necessary to provide a fair rate of return on the Owner's investment as of January 1, 2007 is derived using the internal rate of return mathematical model.

### **B. Rent Adjustment Derived From Projected Net Income**

#### 1. Inflation and the Choice of Comparative Fair Rate of Return

In Part III above the nominal fair rate of return on investment is determined to be 11.84 percent, which takes into account the long-term inflation rate of 2.5 percent. The projected net income and resultant calculation of return on investment also includes an inflationary component. By taking the *nominal* fair rate of return as the bench mark rather than the *real* rate of return, compatibility with the forecasted data set is maintained.

#### 2. Time Horizon and Projected Data

An investment in property, such as Windmill, is generally considered a long-term proposition. To reflect the long-term nature of the investment, a 20-year time horizon is used in the projections. Consequently, the look-forward analysis is applied for the period 2007 through 2026. The data and analysis for the look forward approach are found in Table 6.

##### *a. Space Rent Revenues and Other Revenues*

Projected rent revenues without a fair rate of return rent increase are shown in Column 1 of Table 6. For 2007 the space rental income is derived from the March 2007 rent roll. The average per space rent is \$391.23, which for the year 2007 equates to \$422,280. If no fair rate of return rent adjustment is made the yearly increase in rents is

TABLE 6

Windmill Mobile Estates  
 Look-Forward Approach for Determining a Rent Increase

1. Long Run Inflation Rate	2.500%
2. Allowable Rent Increase at 75% of Inflation	1.875%
<b>3. 2008 \$ Rent Increase Per Space Per Month</b>	<b>\$192.55</b>
4. Cost of Initial Investment in 2006 Dollars	\$4,471,481
5. 2026 Inflation Adjusted Property Value	\$7,327,042
6. Number of Spaces	90

Column	1	2	3	4	5	6
Year	Projected Revenue with Inflation Rent Increase	Projected Revenue with One Time Rent Increase	Other Revenues	Total Projected Revenue	Total Projected Expenses	Projected Net Income
2007	422,280	422,280	148,576	570,856	299,156	271,700
2008	430,198	630,234	152,290	782,524	316,238	466,286
2009	438,264	642,051	156,098	798,149	323,675	474,473
2010	446,481	654,089	160,000	814,089	331,289	482,800
2011	454,853	666,354	164,000	830,354	339,084	491,269
2012	463,381	678,848	168,100	846,948	347,065	499,883
2013	472,070	691,576	172,303	863,879	355,235	508,644
2014	480,921	704,543	176,610	881,153	363,600	517,554
2015	489,938	717,753	181,025	898,779	372,163	526,615
2016	499,125	731,211	185,551	916,762	380,931	535,831
2017	508,483	744,921	190,190	935,111	389,907	545,204
2018	518,017	758,889	194,945	953,833	399,097	554,736
2019	527,730	773,118	199,818	972,936	408,506	564,430
2020	537,625	787,614	204,814	992,427	418,139	574,288
2021	547,706	802,382	209,934	1,012,316	428,002	584,313
2022	557,975	817,426	215,182	1,032,609	438,100	594,509
2023	568,437	832,753	220,562	1,053,315	448,438	604,877
2024	579,095	848,367	226,076	1,074,443	459,023	615,420
2025	589,953	864,274	231,728	1,096,002	469,860	626,141
2026	601,015	880,479	237,521	1,118,000	480,956	7,964,086

Internal Rate of Return 11.84%

constrained to 75 percent of the previous year's inflation rate, as stated in Article II, Paragraph 5.36.050 of Morgan Hill Municipal Code 5.36. From 2008 through 2026 the total rent revenues in Column 1 are estimated by adjusting rents in accordance with the Ordinance where the average annual long term inflationary increase is 2.5 percent.

Other revenue sources include utility charges and miscellaneous revenues. Estimated utility charges for 2007, of \$147,149, is based on the March rent roll and is derived in Table 7 below.

**TABLE 7**  
Estimated 2007 Utility Revenue

	Mar-07 Total Utility Revenue	Average Monthly Revenue per Space	Total Yearly Revenue for 2007
Gas	4,897.00	54.41	\$58,764.00
Electricity	3,267.21	36.30	39,206.52
Water	918.70	10.21	11,024.40
Sewer	1,506.60	16.74	18,079.20
Trash	1,672.92	18.59	20,075.04
<b>Total Utility Revenue</b>			<b>\$147,149.16</b>

Miscellaneous revenue for 2007 is \$1,427 and is derived by incrementing 2006 miscellaneous revenues of \$1,392 by the long term inflation rate of 2.5 percent. Total Other Revenue for 2007 is thus \$148,576 (\$147,149 + \$1,427), as shown in Table 6, Column 3. For the following years 2008 through 2026 Total Other Revenue is derived by incrementing the 2007 amount by the average annual long term inflation rate of 2.5 percent.

*b. Expenses*

Total Projected Expenses, shown in Table 6, Column 5, are derived by forecasting management fees, property taxes and all other expenses separately. Management fees are determined by taking 5 percent of forecasted space rent revenues in Column 2, as provided for in Paragraph 5.36.260 C.1. c of the Ordinance. For 2007 management fees are estimated at \$21,115. Property tax for 2007 is estimated at \$53,292.38 and is based on the County of Santa Clara Notice of Enrollment of Escape Assessment, July 6, 2007 and the Secured Property Tax Bill 2006-2007. For each of the following years 2008 through 2026 property taxes are increased by 2 percent of the previous years' property taxes.

For 2007 all other expenses, excluding interest, depreciation and income taxes, amounts to 224,750. It is derived by taking all other expenses for 2006 of \$219,268 and incrementing it by the long term inflation rate of 2.5 percent. Total Expenses for 2007 is thus projected to be \$299,156 ( $\$224,750 + \$21,114 + \$53,292$ ). If the annualized 2007 data were used the category Other Expenses would be higher at \$317,476 ( $\$264,194 + \$53,292$ ).

*c. Inflation Adjusted Investment Value*

The inflation adjusted price for Windmill plus closing costs is determined as of December 31, 2006 since the projections take into account a full year's revenue in 2007. The CPI index as of December 31, 2006 was 210.4, which results in an inflation adjustment of 1.0365 from the purchase period CPI on August 2005 resulting in an inflation adjusted purchase price of 4,471,481. To determine the equivalent dollar value of Windmill in 2026 the price is adjusted for inflation. By incrementing the 2006 investment of Windmill each year by the annual average future inflation rate of 2.5 percent the inflation-adjusted investment in the year 2026 of \$7,327,042 is derived. It is to be noted that the 2026 inflation-adjusted investment represents an estimate of Windmill's terminal strictly on an inflation adjustment basis and not on the net income generated by Windmill at that time. The inflation-adjusted investment amount is then used as a proxy for the additional financial return that may be received if Windmill is sold at the end of year 2026.

3. Deriving a Rent Increase to Achieve a Fair Rate of Return on Investment from the Projected Data

An appropriate rent increase is derived when the future stream of net income plus the final sale of the property yields the *nominal* fair rate of return of 11.84 percent, as determined in Part III above. The mathematical method of determining when the fair rate of return is reached is to apply the internal rate of return calculation. The internal rate of return method solves for that rate of return that equilibrates a future stream of income to the present value of the initial investment, where the future stream of income includes the inflation-adjusted value of the sale of the Property at the end of the twentieth year.

It is important to point out that the theoretical and mathematical basis for this approach are consistent with the current real estate literature as published in both the trade and academic journals and texts. In Appendix 5.1, a reprint entitled "Using Present Value Analysis" published in the Real Estate Center Journal, by the Real Estate Center at Texas A&M is provided as a representative article of the literature in this area. With respect to risk and the rate of return the authors point out that "...it is necessary to understand only that an investor establishes a required rate of return for all investments

being considered. The level of risk inherent in each investment is reflected in the required rate of return."

#### 4. Required Rent Adjustment and Alternative Outcomes

The desired future stream of net income necessary to achieve a fair rate of return is derived by projecting total revenues based on a rent adjustment starting on January 1, 2008. In Table 6, Column 2 the projected yearly total rent revenue increase based on a January 1, 2008 initial rent increase of \$192.55 per month per space is shown. With the implementation of the \$192.55 per month per space rent increase the *nominal* fair rate of return of 11.84 percent is achieved. Total Projected Revenue is presented in Column 4 and Total projected income plus the terminating value of Windmill for the period under study is in Column 6.

**As shown in Table 6 the one time rent increase commencing on January 1, 2008 necessary to achieve an 11.84 percent fair rate of return on the inflation adjusted invested capital in Windmill is \$192.55 per month per space.**

To the extent that future capital investments take place without pass through rent increases, the derived internal rate of return on investment is biased upwards. That is, in the presence of future capital investments, the realized rate of return on investment will be lower than the calculated rate of return shown in Table 6.

The rental revenue projections are based on a one time rent adjusted plus yearly inflationary adjustments. If the future yearly inflationary rent increases fall below the yearly average inflation rate, the \$192.55 month per space one time rent increase will be insufficient to achieve the 11.84 percent fair rate of return.

## PART VI. MAINTENANCE OF NET OPERATING INCOME AND THE DERIVED RENT ADJUSTMENT

### A. Formulation and Structure

The Maintenance of Net Operating Income method for the determination of a rent adjustment is carried out in accordance with Paragraphs 5.36.050, 5.36.270, 5.36.290, 5.36.300 and 5.36.310 of Morgan Hill Municipal Code 5.36. The method calls for the calculation of net operating income as of the base year ending 12/31/1981. To calculate net operating income for the base year when data is not available for that year, revenues and expenses are discounted back from the most recent year's net operating income in the following manner.

1. Management fees are set equal to 5 percent of rent revenues
2. Property tax is discounted 2 percent annually.
3. All other expenses excluding depreciation, debt burden and tax are discounted at 10 percent annually.
4. Rent Revenues are discounted by 75 percent of the previous year's inflation rate.

The allowable rent increase formula, defined in Paragraph 5.36.310 of the Ordinance, is determined by first incrementing the base net operating income by 40 percent of the CPI increase between February 1981 and the year of the proposed rent adjustment. Then by subtracting the adjusted base year NOI from the proposed adjustment year's NOI, 2006 determines the difference in net operating income, which is to be resolved by a rent increase.

### B. Derivation of Net Operating Income for the Base Year 1981

#### 1. Discounting Gross Income

The calculation of the discounted gross income to the base year is shown in Table 8. As in the look-forward approach revenues are divided into space rent and other revenues, which include charges for utilities and miscellaneous revenues. Space rent for 2006 is estimated from the March 2007 rent roll. The average space rent per month, excluding unit 6 and 77 both of which were recently rented, was \$382.22. The potential total revenue from the 2006 space over the 90 spaces in Windmill is thus \$412,796. For 2005 the 2006 space rent is discounted back at 75 percent of the inflationary increase from 2005 through 2006. This stepwise process is carried back to 1981. In Table 8, Column 2 the annual CPI for each year is presented and the increase in CPI is shown in Column 3. Discounted Space Rental Revenue is shown in Table 8, Column 4.

Other Rental Revenue is composed of utility charges and miscellaneous revenue. Utility Charges for 2006, of \$146,445, is estimated by subtracting potential Space Rental Revenue of \$412,796 from the 2006 Rent Revenue of \$559,241, as shown on the 2006 Income Statement. Miscellaneous revenue for 2006 is \$1,392. Total Other

TABLE 8  
 Determination of Base Year 1981 Net Operating Income

Operating Expenses Discount	10.0%
Management Expenses	5.0% of Revenues
Property Tax Discount	2.0%
Allowable Revenue Increase	75.0% CPI % Increase
NOI Allowable Increase	40.0% CPI % Increase

1	2	3	4			8				11
			Revenues			Operating Expenses				
Annual CPI	Percent Increase in CPI	Space Rent Revenue	Other Revenue	Gross Income	Net Other Expense	Mgmt. Fees	Property Tax	Total Operating Expenses	Net Operating Income	
1981	90.8	225,461	66,254	291,715	20,238	14,586	18,893	53,716	237,999	
1982	97.6	6.97%	237,242	70,871	308,113	22,261	15,406	19,271	56,938	251,175
1983	98.4	0.81%	238,689	71,447	310,136	24,487	15,507	19,656	59,650	250,485
1984	104.0	5.38%	248,328	75,294	323,622	26,936	16,181	20,049	63,166	260,456
1985	108.4	4.06%	255,888	78,350	334,238	29,630	16,712	20,450	66,792	267,446
1986	111.6	2.87%	261,391	80,597	341,988	32,593	17,099	20,859	70,551	271,436
1987	115.4	3.29%	267,846	83,251	351,097	35,852	17,555	21,276	74,683	276,414
1988	120.5	4.23%	276,349	86,774	363,123	39,437	18,156	21,702	79,295	283,827
1989	126.4	4.67%	286,023	90,824	376,847	43,381	18,842	22,136	84,359	292,488
1990	132.1	4.31%	295,279	94,743	390,023	47,719	19,501	22,579	89,799	300,224
1991	137.9	4.21%	304,594	98,728	403,322	52,491	20,166	23,030	95,687	307,635
1992	142.5	3.23%	311,968	101,915	413,883	57,740	20,694	23,491	101,925	311,958
1993	146.3	2.60%	318,045	104,563	422,608	63,514	21,130	23,961	108,605	314,003
1994	148.7	1.61%	321,895	106,250	428,145	69,866	21,407	24,440	115,713	312,433
1995	151.6	1.91%	326,513	108,283	434,796	76,852	21,740	24,929	123,521	311,276
1996	155.1	2.26%	332,040	110,726	442,766	84,537	22,138	25,427	132,103	310,663
1997	160.4	3.30%	340,268	114,385	454,653	92,991	22,733	25,936	141,659	312,994
1998	165.5	3.08%	348,132	117,910	466,042	102,290	23,302	26,454	152,047	313,995
1999	172.5	4.06%	358,728	122,694	481,422	112,519	24,071	26,984	163,574	317,848
2000	180.2	4.27%	370,224	127,937	498,161	123,771	24,908	27,523	176,202	321,959
2001	189.9	5.11%	384,407	134,472	518,879	136,148	25,944	28,074	190,166	328,714
2002	193.0	1.61%	389,038	136,632	525,670	149,763	26,284	28,635	204,682	320,988
2003	196.4	1.73%	394,089	138,997	533,087	164,739	26,654	29,208	220,601	312,485
2004	198.8	1.21%	397,657	140,675	538,333	181,213	26,917	29,792	237,922	300,411
2005	202.7	1.92%	403,396	143,382	546,778	199,335	27,339	30,388	257,061	289,716
2006	209.20	3.11%	412,796	147,837	560,633	219,268	19,500	30,996	269,764	290,869

Revenue for 2006 is thus \$147,837, which is discounted back by the yearly inflation rate. Other Revenue is shown in Table 8, Column 5. Total Gross Income, Table 8, Column 6 is the sum of Space Rental Revenue and Other Revenue.

## 2. Discounting Operating Expenses

The discounting of operating expenses is divided into three parts, Net Other Expenses, Management Fees and Property Taxes, which are presented in Table 8, Columns 7 – 9. Net Other Expenses in 2006 of \$219,268 include all expenses other than depreciation, debt burden, income tax, management fees and property tax. In 2006 Management Fees were \$19,500 and Property Tax was \$30,996. As called for in the Ordinance, Paragraph 5.36.300, Net Other Expenses is discounted at the yearly rate of 10 percent and is shown in Table 8, Column 7.

In 2006 Management Fees were not 5 percent of space rental revenues. To conform to the Ordinance, Paragraph 5.36.300, Management Fee expense is derived by taking 5 percent of each year's past year's space rental revenue and is shown in Table 8, Column 8. Property Tax in the 2006 Income Statement was \$30,996 in 2006, based on the assessed value prior to the recent purchase of Windmill.<sup>9</sup> As called for in the Ordinance, Paragraph 5.36.300, it is discounted back at 2 percent yearly and is shown in Table 8, Column 9. Total Operating Expenses are shown in Table 8, Column 10.

## 3. Rent Adjustment Derived from Base Year 1981 Net Operating Income

From Table 8, Column 11, Net Operating Income for the base year 1981 is calculated at \$237,999. The allowed derived Net Operating Income defined in the Ordinance, Paragraph 5.36.310 is calculated as follows:

February 1981 CPI	84.7
December 2006 CPI	210.4
Percent Change in CPI	148.41%
40 Percent of Percent Change	59.36%
12/31/1981 Derived NOI	\$237,999
Allowed Increase Factor	59.36%
Allowed NOI Increase	\$141,282
Plus	
12/31/1981 Derived NOI	\$237,999
<b>Allowed NOI for 2006</b>	<b>\$379,281</b>

<sup>9</sup> See the July 6, 2007 letter from the Office of the Assessor and the County of Santa Clara Secured Property Tax Bill Fiscal Year 2006-2007, both found in Appendix 4.3.

The net operating income that requires an adjustment of rent to reach the Allowed NOI for 2006 is \$88,412. The monthly rent adjustment based on the net operating income shortfall is \$81.86 per space calculated as follows:

Allowed NOI for 2006	\$379,281
Actual NOI for 2006	\$290,869
Allowed Rent Revenue Increase	<hr/>
	\$88,412
Number of Spaces	90
Space Rent Adjustment per Month	\$81.86

**Given the conditions set for the determination a rent adjustment based on the maintenance of net operating income formula the per month rent adjustment is \$81.86.**

**PART VII. DISCUSSION AND MATHEMATICAL PROOF CONNECTED TO  
ECONOMIC ISSUES AND PRESUMPTIONS IN MORGAN HILL MUNICIPAL CODE,  
PARAGRAPH 5.36.301 ALLOWABLE RENT INCREASES**

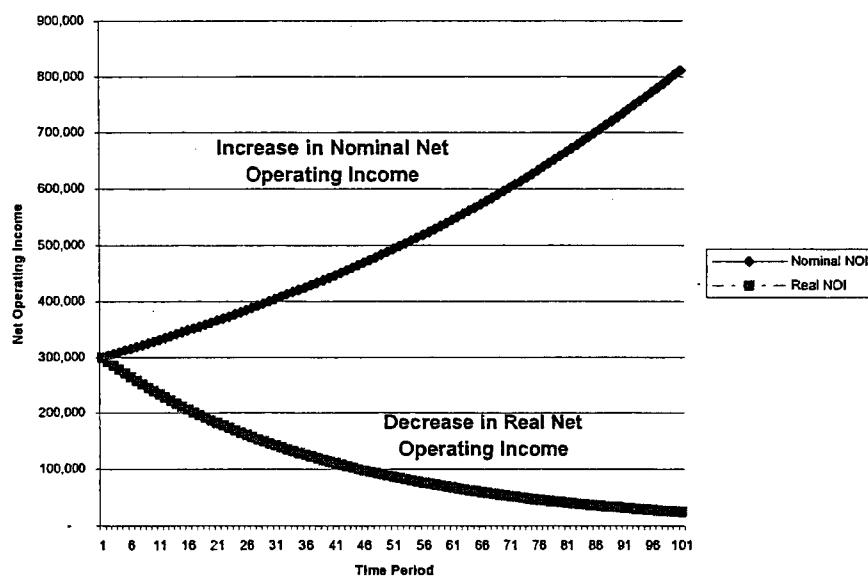
**A. The Affect of Constraining Net Operating Income Growth To Below The Inflation Rate**

It is a mathematical certainty that if Net Operating Income (NOI) is constrained to increase at a fraction of the inflation rate then the *real* value of NOI will approach zero at some time in the future. Furthermore, the higher the inflation rate and the smaller the fraction of allowable inflationary increases, the faster *real* NOI will approach zero. Thus, in Morgan Hill Municipal Code, Paragraph 5.36.301 Allowable Rent Increases, the maintenance of NOI formula provided assures that real NOI will approach zero.

A mathematical proof is provided that demonstrates the propositions stated above. A Graphic example of the decay function derived in the mathematical proof is shown in Chart 1 based on initial NOI of \$300,000 a 2.5 percent long-term inflation rate and an allowable NOI increase of 40 percent of the inflation rate.

**CHART 1**

**Inflationary Impact of the Maintenance of Net Operating Income Formulation**



## **B. Mathematical Proof**

***Proof of the Proposition that if Nominal Net Operating Income is Increased Over Time at Less Than the Inflationary Rate, Real Net Operating Income Will Approach Zero***

Let:

NOI = Net Operating Income

$N_o$  = Nominal NOI at time zero

$N_t$  = Nominal NOI at some future time 't'

$r$  = inflation rate

$t$  = time period

A. If  $N_o$  is allowed to increase at a compound rate less than the inflationary rate 'r', than the Nominal NOI at some future time 't' may be expressed as:

$$1. N_t = N_o e^{prt}$$

Where:

$e$  = the irrational number 2.71828...

'p' is some number equal to or less than one and equal to or greater than zero

B. Real NOI is defined as Nominal NOI adjusted for inflation and is equal to:

$$2. R_t = N_t / e^r t = N_o e^{prt} / e^{rt}$$

Where:

$R_t$  = Real NOI at time t

C. Rearranging expression 2 above results in:

$$R_t = N_o e^{-rt} e^{prt}$$

$$R_t = N_o e^{rt(1-p)}$$

$$3. R_t = N_o e^{-rt(1-p)}$$

D. Expression 3 is an exponential growth function with a negative rate of growth of  $-r(1-p)$  which is sometimes referred to as the rate of decay.

Now by rearranging Expression 3 as:

$$4. R_t = N_0 / e^{r(1-p)t}$$

We find that as 't' approaches infinity the expression  $e^{r(1-p)t}$  approaches infinity and  $R_t$  approaches zero.

From the A-D above we draw the following conclusions:

1. With the increase of time the real value of NOI declines such that as time 't' approaches infinity the real value of NOI approaches zero.
2. If NOI at time period zero is increased at the inflationary rate 'r', that is when 'p' equals one, then the expression  $e^{r(1-p)t}$  equals one and  $R_t$ , Real NOI, will always equal  $N_0$ , the Nominal NOI at time period zero.
3. The lower the allowed inflationary increase, that is when 'p' approaches zero, the faster the rate of decay of  $R_t$ , Real NOI.
4. The higher the inflation rate the faster  $R_t$ , Real NOI, will approach zero in the absence of inflationary increases for  $N_0$ , Nominal NOI at time period zero.

## PART VIII. SUMMARY OF FINDINGS

PW Property Investment, LLC, the Parkowner of Windmill Mobile Estates commissioned this study to determine a fair rate of return on its investment and the rent increase necessary to realize it. The study conforms to the received financial and economic principals in the determination of the fair rate of return on the Parkowner's investment.

The *nominal* fair rate of return on the Parkowner's investment in Windmill is derived based on two well established economic approaches. The first approach is to analyze the rates of return of alternative comparative investments in public financial markets. The second approach determines a fair rate of return by taking into account the risk premium connected to the ownership of Windmill and the risk free rate of return represented by the 20-year Treasury Bond rate. An average of the two methods for determining rates of return results in a minimum required *nominal* rate of return of 11.84 percent. Based on an anticipated long-term inflation rate of 2.5 percent the *real* fair rate of return is 9.34 percent.

Determining the rent adjustment consistent with the fair rate of return requires that inflation be taken into consideration. This requirement is adhered to for each of the methods developed for deriving the rent adjustment. The first analytic approach for determining a rent adjustment applies the *real* rate of return to the present value of the Parkowner's investment in Windmill. In the second approach for determining a rent adjustment, the look-forward approach, the future stream of net operating income for the years 2007– 2026 plus a final inflation adjusted value for Windmill as of 2026 are forecasted. By using an internal rate of return mathematical model the rent increase necessary to achieve the required *nominal* fair rate of return on investment of 11.84 percent is achieved.

The third method for determining the rent adjustment follows the requirements set forth in Morgan Hill Municipal Code, Chapter 5.36, Mobile Home Park Rents. The Maintenance of Net Operating Income method is not consistent with economic or financial principals as is shown in the mathematical proof presented in Part VII of this report.

The resulting required rent increases from the three methods used in this study are as follows.

Description of Rent Adjustment Methods	Rent Increase Per Month Per Space
1. Real Rate of Return based on 2006 Data	\$127.86
2. Real Rate of Return based on 2006 Data and Property Tax Adjustment	\$148.73
3. Look Forward Analysis	\$192.55
4. Maintenance of Net Operating Income	\$81.86

## **SOURCES OF INFORMATION**

### **A. Information on Windmill Mobile Estates**

1. Morgan Hill Municipal Code, Chapter 5.36, Mobile Home Park Rents
2. Windmill Mobile Estates Lease Agreement
3. PW Property Investment LLC, Income Statement for Twelve Months Ending December 31, 2006 and For the Six Months Ending June 30, 2007.
4. Windmill Partners, Income Statement –For the Months January 2005 through May 2005.
5. August 5, 2005, Buyer's/Settlement Statement for Windmill Mobile Estates
6. Office of Assessor, County of Santa Clara, Notice of Enrollment of Escape Assessment, dated July 6, 2007.
7. Windmill Mobile Estates Rent Roll for March 2007.

### **B. Data Sources**

1. Consumer Price Index, All Urban Consumers: San Francisco – Oakland – San Jose, CA, Bureau of Labor Statistics, U.S. Department of Labor
2. Consumer Price Index, All Urban Consumers: U.S. City Average, Bureau of Labor Statistics, U.S. Department of Labor
3. Interest rates for 20-Year U.S. Treasury Constant Maturity Rate, Series GS20  
Board of Governors of the Federal Reserve System.
4. Information on the following REITs: American Land Lease, Equity Lifestyle Properties, Sun Communities and United Mobile Homes
  - a) Historical Prices – <http://finance.yahoo.com/q>
  - b) Dividends – <http://moneycentral.msn.com/investor/charts>
5. “2007 Rate Of Return Study, Publicly-Held Real Estate Limited Partnerships and Real Estate Investment Trusts”, Partnership Profiles, Inc., Dallas Texas

6. "RealtyRates.com Investor Survey- 2<sup>nd</sup> Quarter 2007, Current & Historical Cap Rate Indices", R.G. Watts & Company, LLC.
7. "Monetary Trends", Research Department Federal Reserve Bank of St. Louis, February 2007
8. "Valuation of Mobile Home Communities and RV Parks", WRA-Market News Summer 1999, William Robertson Associates, Inc., <http://www.parkbroker.com>

### **C. Articles, Reports and Reference Materials**

1. "Equity Risk Premium", Michael Annin, CFA and Dominic Falaschetti, CFA, in *Valuation Strategies*, January/February 1998.
2. "Fundamental Methods of Mathematical Economics", Alpha C. Chiang, McGraw-Hill Book Company, New York, NY 1967.
3. "Predictions of the Past and Forecasts for the Future: 1976-2025", Roger G. Ibbotson, Ibbotson Associates, April 1999, [www.ibbotson.com/news/dow\\_forecast.asp](http://www.ibbotson.com/news/dow_forecast.asp).
4. "Principles of Corporate Finance", Richard A. Brealy and Stewart C. Myers, McGraw Hill.
5. "The Economics of Rent Regulation" by Skaburskis, Adrejs and Teitz, Michael B in Rent Control, Regulation and the Rental Housing Market, edited by Keating W.D., Teitz, M.B., and Skaburskis, A., published by Center for Urban Policy Research, Rutgers University, NJ, 1988.
6. "Using Present Value Analysis", by Wayne E. Etter, in Real Estate Center Journal, April 1990.

## **CONTINGENT AND LIMITING CONDITIONS**

Information, estimates, and opinions contained in this report are obtained from sources considered reliable: however, no liability for such sources is assumed by the economic consultant.

Client, Firm and its representatives warranted to the economic consultant that the information supplied to the economic consultant was complete and accurate to the best of Client's knowledge: and that any reports, analysis, or other documents prepared for it by the economic consultant will be used only in compliance with all applicable laws and regulations.

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The various estimates of value, projections, rates of return, risk premiums, rent adjustments and all other results herein presented in this report apply to this analysis only, and may not be used out of the context presented herein.

## *Appendix 1*

### **1.1 *Morgan Hill Municipal Code Chapter 5.36, Mobile Home Park Rents***

**1.1    *Morgan Hill Municipal Code Chapter 5.36, Mobile Home Park Rents***

1 of 1 DOCUMENT

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The electronic version of the Morgan Hill, CA Municipal Code is current through Ordinance 1789 N.S., passed August 23, 2006. For more recent provisions, please contact the City.

California  
Morgan Hill Municipal Code  
Title 5 BUSINESS LICENSES GENERALLY  
Chapter 5.36 MOBILE HOME PARK RENTS\*

Morgan Hill Municipal Code § 5.36

§ Chapter 5.36 MOBILE HOME PARK RENTS\*

\*Note to Chapter 5.36

Article I General Provisions

- 5.36.010 Purpose.
- 5.36.020 Definitions.
- 5.36.030 Exceptions to chapter provisions.
- 5.36.035 Rollback related to reinstatement of vacancy control.
- 5.36.036 Hearing process related to rollbacks.

Article II Rental Dispute Hearing Process

- 5.36.040 Hearing process-Established.
- 5.36.050 Space rent increases-Review procedures.
- 5.36.060 Space rent increases-Limit on annual increases.
- 5.36.070 Space rent increases-Exceptions.
- 5.36.080 Hearing process-Submission of petition by owner.
- 5.36.090 Hearing process-Submission of petition by tenants.
- 5.36.100 Petitions-Form.
- 5.36.110 Petitions-Filing requirements.
- 5.36.120 Petitions-Consolidation.
- 5.36.130 Space rent increases-Notice.
- 5.36.140 Space rent increase-Effective when.
- 5.36.150 Hearing-Procedures.
- 5.36.160 Hearing-Fee.
- 5.36.170 Hearing-Conduct.
- 5.36.180 Hearing-Determination.

5.36.190 Hearing-Determination-Notification.

5.36.200 Increase determined not reasonable-Remedies.

5.36.210 Determination-Deemed final.

5.36.220 Determination-Applicability.

5.36.230 Specification of charges.

#### Article III Rent Increase Standards-Fair Return

5.36.250 Determination of reasonableness.

5.36.260 Rent adjustment proceedings-Terminology.

5.36.270 Presumption of base year net operating income.

5.36.280 Adjustment to income computation-Conditions.

5.36.290 Determination of base year net operating income.

5.36.300 Increases in operating expenses-Amounts permitted.

5.36.310 Allowable rent increases.

5.36.320 Limitations on annual increases.

#### Article IV Unlawful Acts-Penalty

5.36.330 Violation-Penalty.

#### Article V Miscellaneous

5.36.350 Extension of time-Service by mail.

5.36.360 Extension of time-Mutual agreement.

5.36.370 Duty of owner to provide copy of chapter.

5.36.380 Rent stabilization fees. \*Note to Chapter 5.36

\* Prior ordinance history: Ords. 606A N.S., 692 N.S. and 756 N.S.

#### Article I General Provisions 5.36.010 Purpose.

A. Mobile home owners, unlike apartment tenants or residents of other rental stock, are in the unique position of having made a substantial investment in a residence for which space is rented or leased. Removal and/or relocation of a mobile home from a park space is not a practical alternative to accepting an excessive rent increase in that it can only be accomplished at substantial cost, and in many instances may cause extensive damage to the mobile home and loss of appurtenances such as integrated landscaping and supporting structures inconsistent with the new location. Because mobile homes are often owned by senior citizens, persons on fixed incomes, and persons of low and moderate income, exorbitant rent increases fall upon these individuals with particular harshness.

B. The city has sponsored extensive negotiations to eliminate the need for the ordinance codified in this chapter. Only one of the city's mobile home parks achieved a mediated solution as a result of this delay. The remaining parks were unable to reach agreement after extensive negotiation; thus, necessitating the ordinance codified in this chapter.

C. Since approximately July, 1981, a heightened pattern of excessive rent increases has emerged within some of the mobile home parks in the city in disregard of the purposes and intent of the city's previous ordinances. Incorporation of these unduly excessive prior increases within the rate structure of this chapter without provisions for their review would materially defeat the purposes and intent of this chapter and the stability it seeks to bring about.

D. The city council declares that it is necessary in the public interest to establish a means by which to resolve the potentially divisive and harmful impasse between park owners and coach owners. After consideration of numerous factors, among which are the relatively small number of parks located within the city, the level of organization and communication between mobile home owners in each park, and mandates of state law, regulations which best fit the needs of the city have been selected.

E. The regulations which are set forth in this chapter are designed to produce stability in rent increases for mobile home park tenants while recognizing the rights of mobile home park owners to receive a just and reasonable return on their property. The standards, utilizing the concept of net operating income and a 1981 base year, adopted by Sections 5.36.250 through 5.36.320 of this chapter are intended to provide the necessary adjustment mechanism to meet constitutional requirements.

F. The council finds that the adoption of the ordinance codified in this chapter will not have a significant, substantial or adverse effect on the physical environment of the community because enactment of this chapter involves no deviation from the general plan and no change in the present use of any property within the city. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.020 Definitions.

For the purposes of this chapter, unless otherwise apparent from the context, certain words and phrases used in this chapter are defined as follows:

A. "Capital improvements" means those improvements which materially add to the value of property, appreciably prolong its useful life, or adapt it to new uses, and which are required to be amortized over the useful life of the improvement pursuant to the straight-line depreciation provision of the Internal Revenue Code, and the regulations issued pursuant thereto.

B. "City clerk" means the city clerk at the city of Morgan Hill or the clerk's designate.

C. "Commission" means the Morgan Hill commission on rents.

D. "Consumer Price Index (CPI)" means the price index for all urban consumers for the San Francisco/Oakland Bay Area (all items), provided by the U.S. Bureau of Labor Statistics.

E. "Housing services" means and includes those services provided and associated with the use or occupancy of a mobile home space, including but not limited to repairs, insurance, maintenance, replacement, painting, light, heat, water, laundry facilities and privileges, refuse removal, parking, recreation facilities, security service and any other benefits, privileges or facilities.

F. "Mobile home" means a structure designed for human habitation and for being moved on a street or highway, whether commonly referred to as a mobile home or as a trailer.

G. "Mobile home owner" or "tenant" means any person owning a mobile home which is located within a mobile home park in the city.

H. "Mobile home park" means an area of land where two or more mobile home spaces are rented, or held out for rent, or made available for use, to accommodate mobile homes used for human habitation.

I. "Mobile home park owner" or "owner" means the owner, lessor, operator or manager of a mobile home park in the city.

J. "Mobile home space" or "space" means a site within a mobile home park designed and available for the location and use of a mobile home for human habitation.

K. "Net operating income" means that return to an owner as described in Article III of this chapter.

L. "Operating expenses" means those costs to an owner as described in Article III of this chapter.

M. "Space rent" means the consideration, including any bonus, benefits or gratuity demanded or received in connection with the use and occupancy of a mobile home space in a mobile home park, or for housing services provided, and security deposits, but exclusive of any amount paid for the use of the mobile home as a dwelling unit.

N. "Space rent increases" means any additional rent demanded of or paid by a tenant for a mobile home space including any reduction in housing services without a corresponding reduction in the moneys demanded or paid for space rent. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.030 Exceptions to chapter provisions.

The provisions of this chapter shall not apply to the following:

A. Space rent or space rent increases during a thirty-day period commencing upon the completion of a new mobile home space or mobile home space first rented after July 1, 1986, where the mobile home previously occupying the space has been removed pursuant to a termination of tenancy.

B. Nothing in this chapter shall operate to restrict the rights of tenants and owners who have entered into agreements providing for a fixed term of a period of greater than twelve months meeting the criteria of California Civil Code Section 798.17, Subdivision (b), and/or a fixed rent for mobile home tenancies.

C. A one-time administrative fee of twenty-five dollars may be imposed for mobile home spaces where the mobile home remains, but ownership of the mobile home is transferred. The aforesaid charge is intended to provide a one-time compensation payment for administrative bookkeeping charges in connection with the ownership transfer. (Ord. 1356 N.S. § 1, 1997; Ord. 1090 N.S. § 1, 1992; Ord. 940 N.S. § 1, 1989; Ord. 856 N.S. § 1 (part), 1988).

#### 5.36.035 Rollback related to reinstatement of vacancy control.

A rollback related in space rent shall be affected as set forth below for mobile homes transferred between October 4, 1989, and the effective date of the ordinance codified in this section. This section shall only apply to space rent for spaces upon which there was a transfer of the mobile home, the mobile home remained on its space in the park, and the transfer occurred between October 4, 1989, and the effective date of the ordinance codified in this section. The space rent for spaces governed by this section collectable from and after the effective date of the ordinance codified in this section shall be established as that space rent in effect at the time of the first transfer of the mobile home after October 4, 1989, adjusted by the amount authorized by any other rent adjustments applicable under this chapter which were applied to other spaces in the mobile home park during the period October 4, 1989, through and including the effective date of the ordinance codified in this section. (Ord. 1090 N.S. § 2 (part), 1992)

#### 5.36.036 Hearing process related to rollbacks.

A. A park owner whose space is subject to the provisions of Section 5.36.035 shall be entitled to invoke the hearing process before the commission over the proposed rent rollback within forty-five days of the effective date of the ordinance codified in this section. A petition under this section may only request review of the applicability and limitations on rents adjusted pursuant to Section 5.36.035 and is intended to afford the owner an opportunity to show that the application of the rollback will create a hardship or deprive the park owner of a fair, just and reasonable return.

B. It is the intent of this section that the space rent charged for any mobile home space by a mobile home park owner shall be no greater than the space rent which would apply if Ordinance No. 940, New Series, had not been adopted. It is the express intent of the city council in adopting this ordinance to reenact, reauthorize and reestablish vacancy control as part of the mobile home rent ordinance. (Ord. 1090 N.S. § 2 (part), 1992)

#### Article II Rental Dispute Hearing Process 5.36.040 Hearing process-Established.

There is established the Morgan Hill mobile home space rental dispute hearing process ("hearing process"). (Ord. 1356 N.S. § 2, 1997; Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.050 Space rent increases-Review procedures.

Except as provided in this chapter, any space rent increase after the effective date of the ordinance codified in this chapter, which exceeds an aggregate of seventy-five percent of the increase of the CPI for the twelve-month period ending sixty days before notice of such rent increase is given, or eight percent, whichever is less, shall be subject to review under the hearing process. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.060 Space rent increases-Limit on annual increases.

The space rent of any mobile home space may not be increased more than once in any twelve-month period except as allowed under Section 5.36.030 of this chapter. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.070 Space rent increases-Exceptions.

If an owner has not raised space rent for more than twenty-four months prior to the latest increase, rental increases in excess of seventy-five percent of the increase in CPI for the twelve-month period ending sixty days before notice of such rent increase is given shall not be subject to this chapter, provided that such increases satisfy the following criteria: If the last increase was more than twenty-four months prior to the current increase, a rental increase not to exceed that set out in Section 5.36.320 of this chapter shall be allowed. (Ord. 856 N.S. § 1 (part), 1988)

**5.36.080 Hearing process-Submission of petition by owner.**

Any owner whose mobile home park is subject to the provisions of this chapter and who seeks to increase rent in excess of the provisions of this chapter shall be required to invoke the hearing process by a petition filed with the city clerk which shall be processed and heard in the same manner as provided in this chapter for tenant applications, provided that the owner shall notify, in writing, all tenants subject to such rental increase and shall include in his filing with the city clerk a document executed by the person who has deposited into the regular first class mail or has personally served the notice affirming the source of the notice upon the tenants, listing the names and addresses of all such tenants. (Ord. 856 N.S. § 1 (part), 1988)

**5.36.090 Hearing process-Submission of petition by tenants.**

A. Upon written petition of more than twenty-five percent whose spaces are subject to the terms of this chapter, the rental dispute hearing process may be invoked.

B. In the petition the tenants shall designate an individual to serve as the tenant representative for the purposes of receipt of all notice, correspondence, decisions and finding of fact required in this chapter. Service of notice upon the designated tenant representative will constitute adequate and sufficient notice to the tenants who signed the petition. Failure to designate a tenant representative will render the petition incomplete and the petition will not be accepted for filing. (Ord. 1356 N.S. § 3, 1997: Ord. 856 N.S. § 1 (part), 1988)

**5.36.100 Petitions-Form.**

The application for review must be filed on a petition form prescribed by the commission and must be accompanied by such supporting material as the commission shall prescribe including, but not limited to, a copy of the owner's notice of space rent increase. Allegations of service reductions shall be submitted in writing. The burden of proof regarding such service reductions shall be on the person alleging such reductions. (Ord. 856 N.S. § 1 (part), 1988)

**5.36.110 Petitions-Filing requirements.**

Except as provided in this chapter, a petition must be filed thirty calendar days prior to the effective date of the increase stated in the notice to tenant; provided however, that a tenant shall have at least ten calendar days after receipt of notice of a space rent increase from the owner in which to file a petition. (Ord. 856 N.S. § 1 (part), 1988)

**5.36.120 Petitions-Consolidation.**

As soon as possible after petitions have been filed with respect to mobile home park spaces which are under common ownership or management but in no event more than seventy-two hours following receipt of a petition regarding a mobile home park space rent increase, the commission shall, to the greatest extent possible, consolidate such petitions. (Ord. 856 N.S. § 1 (part), 1988)

**5.36.130 Space rent increases-Notice.**

Whenever an owner notifies a tenant or tenants of a proposed space rent increase which is subject to review under Section 5.36.050 of this article, the owner shall also notify the tenant by the same type of notice or, at the owner's option, in the same notice in a conspicuous manner of the tenant's right to utilize the rental dispute hearing process and shall provide the following:

- A. A summary of this chapter approved by the commission;
- B. A statement that a copy of the chapter or summary was provided to the tenant; and
- C. The address and telephone number of the city clerk and secretary of the commission. (Ord. 998 N.S. § 1, 1990: Ord. 856 N.S. § 1 (part), 1988)

**5.36.140 Space rent increase-Effective when.**

Providing that a completed petition is timely filed, concerning a space rent increase subject to this chapter, that portion of the requested rental increase (and only that portion) which exceeds the seventy-five percent increase in CPI limitation described in this chapter, shall not take effect unless and until such time as the rent commission allows such increase or portion thereof pursuant to the provisions of this chapter. (Ord. 856 N.S. § 1 (part), 1988)

**5.36.150 Hearing-Procedures.**

Within ten working days from the date the petition as described in this chapter is received by the city clerk, the commission shall conduct a hearing with all parties, or within such additional time as may be mutually agreed upon by all parties to the hearing. The commission should give at least five calendar days' notice to the parties prior to the hearing. The notice period shall commence upon deposit of the notice in the regular first class mail to the parties. Materials to be considered at the hearing must be made available to both parties to the hearing at least three working days in advance of the hearing. Extensions of time for the hearing process may be mutually agreed upon by both parties with the concurrence of the chair of the commission. (Ord. 998 N.S. § 2, 1990: Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.160 Hearing-Fee.

The cost of hearings conducted under this chapter shall be paid by the city from fees collected under the provisions of Section 5.36.380. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.170 Hearing-Conduct.

The hearing shall be conducted by the chair of the commission or by a person selected by the commission. Any party or their counsel may appear and offer such documents, testimony, written declaration or other evidence as may be pertinent to the proceeding. A record of the proceedings shall be prepared by the commission and submitted to the city clerk who shall maintain it for a period not to exceed two years. (Ord. 998 N.S. § 3, 1990: Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.180 Hearing-Determination.

Based upon the evidence presented at the hearing, the commission shall make a determination whether or not, in light of all the evidence presented, the proposed rent increase is reasonable under the circumstances, in accordance with the standards set forth in Section 5.36.250 and following of this chapter. The burden of proof regarding such reasonableness shall be on the owner unless otherwise indicated. The standards set forth in Section 5.36.250 and following are expected to provide for a just and reasonable return to owner in all foreseeable cases. However, an owner shall be permitted to include within the petition additional facts showing that due to unique or special circumstances, the strict application of the formulas set out in Section 5.36.250 and following prevents a just and reasonable return on the owner's property to owner. If the commission concurs, then it may adopt an effective rent schedule or fix an increase thereto up to that required for a just and reasonable return to owner. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.190 Hearing-Determination-Notification.

Within thirty working days following the conclusion of the hearing, the commission shall make a determination in writing that the proposed space rent increase is reasonable under the circumstances or not, and shall make written findings of fact upon which such determination is based. Within the thirty-working-day period, the secretary of the commission shall cause copies of the determination and the findings to be mailed by regular first class mail to the parties. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.200 Increase determined not reasonable-Remedies.

Any rental or service charge increases which have been collected by mobile home park owners pursuant to an increase which is the subject of a petition for hearing and which is later determined by the commission to be excessive, shall, within ninety calendar days be either returned to the tenants or credited to future rental charges at the option of the mobile home park owner. In no event, shall the time period exceed ninety calendar days for carrying out the decision of the commission. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.210 Determination-Deemed final.

The determination of the commission shall be final and shall be delivered to the parties in writing together with written findings of fact supporting such determination by depositing the same in the regular United States mail, first class mail, within thirty working days after the hearing provided in Section 5.36.150. Any party disputing the final conclusions and findings of the commission may seek review of them pursuant to Sections 1094.5 and 1094.6 of the California Code of Civil Procedure. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.220 Determination-Applicability.

The determination made under the provisions of this chapter shall be effective with respect to all mobile home park spaces, unless the tenant of such space has a written lease of a period greater than twelve months meeting the criteria of

California Civil Code Section 798.17, subdivision (b), with the park owner which otherwise sets forth the rights and obligations of the parties with respect to rent. (Ord. 1356 N.S. § 4, 1997; Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.230 Specification of charges.

For any rent increase approved pursuant to proceedings conducted in compliance with the provisions of this chapter, the mobile home park owner shall, when demanding any space rent which includes such allowed amounts, specify with particularity that amount along with a citation as to the authority for that amount and a demonstration of its calculation. Any notice of termination of tenancy served by the mobile home park owner upon a mobile home park tenant on the basis of a failure to pay rent which includes such allowed charges, shall similarly show such charges and the authority for their imposition. (Ord. 856 N.S. § 1 (part), 1988)

#### Article III Rent Increase Standards-Fair Return 5.36.250 Determination of reasonableness.

The commission shall determine whether rent increases are reasonable under the circumstances taking into consideration that the purpose of this chapter is to permit owners a just and reasonable return on their property while protecting tenants from arbitrary, capricious or unreasonable rent increases. The commission's determination shall be made with reference to the standards set out in this article. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.260 Rent adjustment proceedings-Terminology.

For the purposes of space rent adjustment proceedings, the following definitions shall be used:

A. "Net operating income" equals gross income less operating expenses.

B. "Gross income" equals:

1. Gross rents, computed as gross rental income at one hundred percent paid occupancy; plus
2. Interest from rental deposits, unless directly paid by the landlord to the tenants (interest shall be computed at the rate of five and one-half percent of all deposits unless such deposits earn greater interest); plus
3. Income from laundry facilities, cleaning fees or services, garage and parking fees; plus
4. All other income or consideration received or receivable for or in connection with the use or occupancy of rental units and housing services, services, garage and parking fees;
5. Minus uncollected rents due to vacancy and bad debts to the extent that the same are beyond the owner's control. Uncollected rents in excess of three percent of gross rents shall be presumed to be unreasonable unless established otherwise. Where uncollected rents must be estimated, the average of the preceding three years experience shall be used, or some other comparable method.

C.1. "Operating expenses" shall include the following:

a. Real property taxes;

b. Utility costs;

c. Management expenses (contracted or owner performed), including necessary and reasonable advertising, accounting, insurance and other managerial expenses and allowable legal expenses. Management expenses are presumed to be five percent of gross income, unless established otherwise;

d. Normal repair and maintenance expenses, including painting, normal cleaning, fumigation, landscaping and repair of all standard services, including electrical, plumbing and sanitary sewer;

e.i. Owner-performed labor, which shall be compensated at the following hourly rates upon documentation being provided showing the date, time and nature of the work performed:

(A) General maintenance at the general prevailing hourly wage as set out in the most recent "Report of The Labor Commission, U.S. Department of Labor,"

(B) Skilled labor at two times such rate;

ii. Notwithstanding the above, an owner may receive greater or lesser compensation for self-labor if it can be shown that the amounts set forth above are substantially unfair in a given case. There shall be a maximum allowance under this subsection of five percent of gross income, unless the owner shows greater services for the benefit of tenants;

f. Rehabilitation or repair work done on or in a mobile home park in order to comply with an order issued by the building department, or to repair damage resulting from fire, earthquake or other natural disaster;

g. License and registration fees required by law to the extent the same are not otherwise paid by tenants;

h. Capital expenses with a total cost of less than one hundred dollars per year per benefitted space, and the amortized portion of other capital expenses otherwise allowed by regulation.

2. Operating expenses shall not include:

a. Avoidable and unnecessary expenses/increases since the base year;

b. Mortgage principal and interest payments;

c. Any penalties, fees or interest assessed or awarded for violation of this or any other law;

d. Attorneys' fees and legal costs in connection with civil actions against the city;

e. Depreciation;

f. Any expense for which the owner has been reimbursed by any security deposit, insurance settlement, judgment for damages, settlement or any other method;

g. Fees assessed under Section 5.36.380 of this chapter.

D. Base year for purposes of these regulations shall mean calendar year 1981.

E. Consumer Price Index is defined in subsection D of Section 5.36.020 of this chapter. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.270 Presumption of base year net operating income.

Except as provided in Section 5.36.280A of this article, it shall be presumed that the net operating income produced by a property during the base year provided a just and reasonable return on property. Owners shall be entitled to maintain and increase their net operating income from year to year in accordance with Section 5.36.310 of this article. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.280 Adjustment to income computation-Conditions.

It may be determined that the base year net operating income yielded other than a just and reasonable return on property, in which case, the base year net operating income may be adjusted accordingly. In order to make such determination, the hearing officer must make at least one of the following findings:

A. Owner's operating and maintenance expenses in the base year were unusually high or low in comparison to other years. In such instances, adjustments may be made in calculating such expenses so the base year operating expenses reflect average expenses for the property over a reasonable period of time. The commission shall consider the following factors:

1. The owner made substantial capital improvements during 1981, which were not reflected in the rent levels on the base date;

2. Substantial repairs were made due to damage caused by natural disaster or vandalism;

3. Maintenance and repair was below accepted standards so as to cause significant deterioration in the quality of housing services;

4. Other expenses were unreasonably high or low notwithstanding the following of prudent business practice. In making this determination, the fact that property taxes prior to 1981 may have been higher than in the base year shall not be considered.

B. The rent on the base date was disproportionate due to one of the enumerated factors below. In such instances, adjustments may be made in calculating gross rents consistent with the purposes of this chapter.

1. The rent on the base date was established by a lease or other formal rental agreement which provided for substantially higher rent at other periods during the term of the lease;

2. The rent on the base date was substantially higher or lower than at other times of the year by reason of seasonal demand or seasonal variations in rent;

3. The rent on the base date was substantially higher or lower than preceding months by reason of premiums being charged or rebates being given for reasons unique to particular spaces or limited to the period determining the base rent.

C. It shall be presumed that where net operating income is less than fifty percent of gross income in the base year, after making adjustments as permitted by subsections A and B of this section, the owner was receiving less than a just and reasonable return on property. In such a case, for purposes of determining base year net operating income, gross income shall be adjusted upward to twice the amount of adjusted base year operating expenses. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.290 Determination of base year net operating income.

A. To determine the net operating income during the base year, there shall be deducted from the annualized gross income being realized on January 1, 1982, a sum equal to the actual operating expenses for calendar year 1981, unless the owner demonstrates to the satisfaction of the commission that some other twelve consecutive month period is justified by reasons independent of the purpose of this article. In all cases, January 1, 1982, shall fall within the twelve-month period utilized in this chapter, except as provided in subsection B of this section.

B. In the event that the owner did not own the subject property on January 1, 1982, the operating expenses for 1981 shall be determined in one of the following manners, whichever the commission determines to be more reliable in the particular case:

1. The previous owner's actual operating expenses as defined in subsection C of Section 5.36.260 of this article or, where unavailable;

2. Actual operating expenses for the first calendar year of ownership, discounted to 1981 by the schedule in Section 5.36.300 of this article.

C. In the event that a petition for rent increase involves less than fifty percent of the spaces in a mobile home park, the net operating income for the base year shall be determined only for the spaces affected by the petition. The net operating income for these spaces will be determined under the procedure outlined in Section 5.36.260. Should specific documentation not be available on individual spaces for the base year, the commission shall make a reasonable determination of the net operating income. (Ord. 998 N.S. § 4, 1990: Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.300 Increases in operating expenses-Amounts permitted.

Where scheduling of rent increase, or other calculations require projections of income and expenses, it shall be assumed that operating expenses, exclusive of property taxes and management expenses, increase at ten percent per year, that property taxes increase at two percent per year, and that management expenses are five percent of gross income. (Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.310 Allowable rent increases.

A. Upon filing of a petition by an owner, rent increases may be permitted such that the owner's net operating income will be increased at the rate of forty percent of the increase in the CPI over the base year. The increase in the CPI shall be calculated by dividing the most recently reported monthly figure at the time of filing of the petition by the monthly figure for February 1981 = (2/81 CPI = 260.5).

B. In the event that a petition by an owner involves less than fifty percent of the spaces in a mobile home park, rent increases may be permitted such that the owner's net operating income on the affected spaces will be increased at the rate of forty percent of the CPI over the base year. (Ord. 998 N.S. § 5, 1990: Ord. 856 N.S. § 1 (part), 1988)

#### 5.36.320 Limitations on annual increases.

Notwithstanding any other provision of this chapter, no upward rent adjustment may be authorized for any given year in an amount in excess of twice the San Francisco/Oakland Bay Area Consumer Price Index (CPI) or fifteen percent, whichever is less. The applicable figure for the CPI shall be the figure for the twelve month period ending sixty days before the notice of rent space was given. If the amount of any individual adjustment otherwise justified under this article is greater than such limit, the full justified amount shall be granted over a period of years such that the rent does not increase by greater than the limit in any given year. (Ord. 998 N.S. § 6, 1990: Ord. 856 N.S. § 1 (part), 1988)

**Article IV Unlawful Acts-Penalty 5.36.330 Violation-Penalty.**

No person shall demand, accept, receive or retain any rent in excess of the amounts allowed under this chapter. Any person may file a complaint regarding an alleged violation of this chapter with the city clerk. The city attorney is authorized to, in his discretion, investigate and prosecute those complaints that in his determination merit prosecution. Any person found to have demanded, accepted, received or retained any rent in excess of the amounts allowed under this chapter is guilty of an infraction. Unless otherwise stated, the penalty to be imposed upon conviction shall be (1) a fine not exceeding one hundred dollars for a first conviction; (2) a fine not exceeding two hundred dollars for a second violation of the same ordinance within one year; (3) a fine not exceeding five hundred dollars for each additional violation of the same ordinance within one year. For this purpose, a bail forfeiture shall be deemed to be a conviction of the offense charged. (Ord. 856 N.S. § 1 (part), 1988)

**Article V Miscellaneous 5.36.350 Extension of time-Service by mail.**

Whenever any notice or determination called for by this chapter is served by mail, the time for compliance set out in this chapter shall be extended one calendar working day. Further when the last day for compliance falls upon a legal holiday, the time for compliance is extended to the next working day. (Ord. 856 N.S. § 1 (part), 1988)

**5.36.360 Extension of time-Mutual agreement.**

By written agreement of the parties or upon application to the commission and for good cause shown, the time frames provided for under this chapter may be extended. (Ord. 856 N.S. § 1 (part), 1988)

**5.36.370 Duty of owner to provide copy of chapter.**

It shall be the duty of every owner to provide a summary copy of this chapter to each tenant who rents or leases a space from the owner. This summary copy will be composed by the city attorney and available through the city clerk. A single summary copy will be provided each owner by the city for reproduction by the owner. (Ord. 856 N.S. § 1 (part), 1988)

**5.36.380 Rent stabilization fees.**

The costs of operation of this chapter shall be paid from fees assessed annually by the city upon park owners. Such fees shall be set by resolution which shall be reviewed annually. Such fees shall be assessed on each mobile home space other than those exempted under the provisions of subsection C of Section 5.36.030. The fees shall be assessed on October 1st of each year, for all spaces not exempted from the chapter as of September 30th of the same calendar year. No more than one-half of the per space charge may be collected by the park owner from the tenant of the space for which the fee is paid. Any park owner who has not paid the assessed rent stabilization fees within ninety calendar days of the receipt of the notice of a fee assessment shall be subject to a penalty in the form of a fine equal to five percent of the total assessment. Notice of the potential for a fine shall be included in the original notice of fee assessment. Fines may not be collected by the park owner from the tenant of the space for which the fee is paid. Any park owner who has not paid the rent stabilization fee within one hundred twenty calendar days of the notice of fee assessment shall be found to be in violation of the ordinance and subject to the penalties of Section 5.36.330. (Ord. 1356 N.S. § 5, 1997; Ord. 856 N.S. § 1 (part), 1988)

## *Appendix 2*

- 2.1 *Federal Reserve Board Table of 20-Year Bond Rates*
- 2.2 *CPI Index – US City Average, All Urban Consumers  
1982-1984=100*  
*CPI Index – San Francisco – Oakland – San Jose, CA -  
All Urban Consumers 1982-1984=100*
- 2.3 *“Monetary Trends”, Research Department Federal  
Reserve Bank of St. Louis, February 2007*
- 2.4 *Principles of Corporate Finance”, Richard A. Brealy and  
Stewart C. Myers, McGraw Hill, Chapter 23, pp. 543-547*
- 2.5 *“The January 17, 1944 Northridge, CA Earthquake”*

***2.1 Federal Reserve Board Table of 20-Year Bond Rates***

Title: 20-Year Treasury Constant Maturity Rate  
Series ID: GS20  
Source: Board of Governors of the Federal Reserve System  
Release: H.15 Selected Interest Rates  
Seasonal Adjustment: Not Applicable  
Frequency: Monthly  
Units: Percent  
Date Range: 1953-04-01 to 2004-04-01  
Last Updated: 2004-05-04 9:36 AM CT  
Notes: Averages of business days. For information on the break in this series from January 1987 through September 1993, please refer to information available at <http://www.federalreserve.gov/releases/h15/data.htm>. When viewing the FRED chart with the range set to "Max," the straight line between these dates represents the break in the series and is not intended to represent actual yields.

For further information regarding treasury constant maturity data, please refer to  
<http://www.federalreserve.gov/releases/h15/current/h15.pdf> and  
<http://www.treas.gov/offices/domestic-finance/debt-management/interest-rate/index.html>

DATE	VALUE
1994-01-01	6.39
1994-02-01	6.57
1994-03-01	7.00
1994-04-01	7.40
1994-05-01	7.54
1994-06-01	7.51
1994-07-01	7.67
1994-08-01	7.62
1994-09-01	7.87
1994-10-01	8.08
1994-11-01	8.20
1994-12-01	7.99
	Average 1994
1995-01-01	7.97
1995-02-01	7.73
1995-03-01	7.57
1995-04-01	7.45
1995-05-01	7.01
1995-06-01	6.59
1995-07-01	6.74
1995-08-01	6.92
1995-09-01	6.65
1995-10-01	6.45
1995-11-01	6.33
1995-12-01	6.12
	Average 1995
1996-01-01	6.11
1996-02-01	6.30
1996-03-01	6.74
1996-04-01	6.98
1996-05-01	7.11

DATE	VALUE		
1996-06-01	7.22		
1996-07-01	7.14		
1996-08-01	6.97		
1996-09-01	7.17		
1996-10-01	6.90		
1996-11-01	6.58		
1996-12-01	6.65	Average 1996	6.82
1997-01-01	6.91		
1997-02-01	6.77		
1997-03-01	7.05		
1997-04-01	7.20		
1997-05-01	7.02		
1997-06-01	6.84		
1997-07-01	6.56		
1997-08-01	6.65		
1997-09-01	6.56		
1997-10-01	6.38		
1997-11-01	6.20		
1997-12-01	6.07	Average 1997	6.68
1998-01-01	5.88		
1998-02-01	5.96		
1998-03-01	6.01		
1998-04-01	6.00		
1998-05-01	6.01		
1998-06-01	5.80		
1998-07-01	5.78		
1998-08-01	5.66		
1998-09-01	5.38		
1998-10-01	5.30		
1998-11-01	5.48		
1998-12-01	5.36	Average 1998	5.72
1999-01-01	5.45		
1999-02-01	5.66		
1999-03-01	5.87		
1999-04-01	5.82		
1999-05-01	6.08		
1999-06-01	6.36		
1999-07-01	6.28		
1999-08-01	6.43		
1999-09-01	6.50		
1999-10-01	6.66		
1999-11-01	6.48		
1999-12-01	6.69	Average 1999	6.19
2000-01-01	6.86		
2000-02-01	6.54		
2000-03-01	6.38		
2000-04-01	6.18		
2000-05-01	6.55		
2000-06-01	6.28		
2000-07-01	6.20		
2000-08-01	6.02		

DATE	VALUE		
2000-09-01	6.09		
2000-10-01	6.04		
2000-11-01	5.98		
2000-12-01	5.64	Average 2000	6.23
2001-01-01	5.65		
2001-02-01	5.62		
2001-03-01	5.49		
2001-04-01	5.78		
2001-05-01	5.92		
2001-06-01	5.82		
2001-07-01	5.75		
2001-08-01	5.58		
2001-09-01	5.53		
2001-10-01	5.34		
2001-11-01	5.33		
2001-12-01	5.76	Average 2001	5.63
2002-01-01	5.69		
2002-02-01	5.61		
2002-03-01	5.93		
2002-04-01	5.85		
2002-05-01	5.81		
2002-06-01	5.65		
2002-07-01	5.51		
2002-08-01	5.19		
2002-09-01	4.87		
2002-10-01	5.00		
2002-11-01	5.04		
2002-12-01	5.01	Average 2002	5.43
2003-01-01	5.02		
2003-02-01	4.87		
2003-03-01	4.82		
2003-04-01	4.91		
2003-05-01	4.52		
2003-06-01	4.34		
2003-07-01	4.92		
2003-08-01	5.39		
2003-09-01	5.21		
2003-10-01	5.21		
2003-11-01	5.17		
2003-12-01	5.11	Average 2003	4.96
2004-01-01	5.01		
2004-02-01	4.94		
2004-03-01	4.72		
2004-04-01	5.16		
2004-05-01	5.46		
2004-06-01	5.45		
2004-07-01	5.24		
2004-08-01	5.07		
2004-09-01	4.89		
2004-10-01	4.85		
2004-11-01	4.89		

DATE	VALUE		
2004-12-01	4.88	Average 2004	5.05
2005-01-01	4.77		
2005-02-01	4.61		
2005-03-01	4.89		
2005-04-01	4.75		
2005-05-01	4.56		
2005-06-01	4.35		
2005-07-01	4.48		
2005-08-01	4.53		
2005-09-01	4.51		
2005-10-01	4.83		
2005-11-01	4.73		
2005-12-01	4.65	Average 2005	4.64
2006-01-01	4.65		
2006-02-01	4.73		
2006-03-01	4.91		
2006-04-01	5.22		
2006-05-01	5.35		
2006-06-01	5.29		
2006-07-01	5.25		
2006-08-01	5.08		
2006-09-01	4.93		
2006-10-01	4.94		
2006-11-01	4.78		
2006-12-01	4.78	Average 2006	4.99
2007-01-01	4.95		
2007-02-01	4.93		
2007-03-01	4.81		
2007-04-01	4.95		
2007-05-01	4.98		
2007-06-01	5.29	Average 2007	4.99

## Collateralized Mortgage Obligations

Spread of CMO yields above U.S. Treasury securities of comparable maturity,  
in basis points (100 basis points=1 percentage point of interest)

Maturity	Spread	Change From Previous Day
<b>SEQUENTIALS</b>		
2-year	85	...
5-year	100	...
7-year	109	...
10-year	113	...
20-year	119	...
<b>PACS</b>		
2-year	66	...
5-year	85	...
7-year	97	...
10-year	102	...
20-year	104	...

2.2 *CPI Index – US City Average, All Urban Consumers 1982-1984=100*

*CPI Index – San Francisco – Oakland – San Jose, CA - All Urban Consumers 1982-1984=100*



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## Consumer Price Index - All Urban Consumers

Series Id: CUURAA422SA0

Not Seasonally Adjusted

Area: San Francisco-Oakland-San Jose, CA

Item: All items

Base Period: 1982-84=100

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
1980	78.3		79.2		80.7		81.6		81.9		82.9	80.4			
1981	84.7		87.9		89.1		93.6		96.6		95.6	90.8			
1982	96.2		97.2		99.1		99.0		98.4		95.6	97.6			
1983	96.7		97.4		98.6		99.5		99.4		100.0	98.4			
1984	101.4		102.9		103.7		105.2		106.5		106.0	104.0	102.3	105.7	
1985	106.9		107.5		108.4		109.2		109.5		109.4	108.4	107.4	109.3	
1986	111.0		110.4		111.9		112.4		113.1		111.8	111.6	110.9	112.4	
1987	112.5	113.4	113.7	114.8	115.0	115.0	115.8	116.1	116.6	117.1	117.3	117.4	115.4	114.1	116.1
1988	118.4	117.9	119.1	118.7	119.7	120.1	120.9	122.0	122.1	122.3	122.2	122.6	120.5	119.0	122.0
1989	124.0	124.0	125.9	125.4	126.3	126.2	127.4	128.1	126.8	127.5	127.2	127.4	126.4	125.3	127.4
1990	128.5	129.2	130.0	130.7	130.8	131.6	132.3	133.1	134.0	134.6	134.7	135.1	132.1	130.1	134.0
1991	136.7	136.1	136.3	135.8	136.2	137.6	138.2	139.1	139.7	139.6	139.8	139.8	137.9	136.5	139.4
1992	140.3	141.0	141.9	141.6	141.9	141.9	142.2	142.7	143.7	144.3	144.2	144.3	142.5	141.4	143.6
1993	145.1	145.5	145.7	146.8	146.9	146.1	146.1	146.2	146.5	147.0	147.2	147.0	146.3	146.0	146.7
1994	147.5	147.4	148.2	148.0	148.3	148.1	148.9	149.4	149.4	149.4	149.8	149.4	148.7	147.9	149.4
1995	150.3	150.5	151.1	151.5	151.3	151.7	151.5	151.5	152.3	152.6	152.4	152.1	151.6	151.1	152.1
1996	152.9	153.2	152.9	153.9	155.1	155.2	155.9	155.6	156.3	156.9	156.9	156.0	155.1	153.9	156.3
1997	157.0	157.9	159.2	159.6	159.8	160.0	160.6	161.2	161.6	162.5	162.6	162.6	160.4	158.9	161.9
1998		163.2		164.6		165.5		166.6		167.2		167.4	165.5	164.2	166.9
1999		169.4		172.2		171.8		173.5		175.2		174.5	172.5	170.8	174.2
2000		176.5		178.7		179.1		181.7		183.4		184.1	180.2	177.7	182.6
2001		187.9		189.1		190.9		191.0		191.7		190.6	189.9	188.7	191.1
2002		191.3		193.0		193.2		193.5		194.3		193.2	193.0	192.3	193.7
2003		197.7		197.3		196.3		196.3		196.3		195.3	196.4	196.8	196.1
2004		198.1		198.3		199.0		198.7		200.3		199.5	198.8	198.2	199.5
2005		201.2		202.5		201.2		203.0		205.9		203.4	202.7	201.5	203.9
2006		207.1		208.9		209.1		210.7		211.0		210.4	209.2	207.9	210.5
2007		213.688		215.842		216.123								214.736	



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## Consumer Price Index - All Urban Consumers

Series Id: CUUR0000SA0

Not Seasonally Adjusted

Area: U.S. city average

Item: All items

Base Period: 1982-84=100

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
1997	159.1	159.6	160.0	160.2	160.1	160.3	160.5	160.8	161.2	161.6	161.5	161.3	160.5	159.9	161.2
1998	161.6	161.9	162.2	162.5	162.8	163.0	163.2	163.4	163.6	164.0	164.0	163.9	163.0	162.3	163.7
1999	164.3	164.5	165.0	166.2	166.2	166.2	166.7	167.1	167.9	168.2	168.3	168.3	166.6	165.4	167.8
2000	168.8	169.8	171.2	171.3	171.5	172.4	172.8	172.8	173.7	174.0	174.1	174.0	172.2	170.8	173.6
2001	175.1	175.8	176.2	176.9	177.7	178.0	177.5	177.5	178.3	177.7	177.4	176.7	177.1	176.6	177.5
2002	177.1	177.8	178.8	179.8	179.8	179.9	180.1	180.7	181.0	181.3	181.3	180.9	179.9	178.9	180.9
2003	181.7	183.1	184.2	183.8	183.5	183.7	183.9	184.6	185.2	185.0	184.5	184.3	184.0	183.3	184.6
2004	185.2	186.2	187.4	188.0	189.1	189.7	189.4	189.5	189.9	190.9	191.0	190.3	188.9	187.6	190.2
	190.7	191.8	193.3	194.6	194.4	194.5	195.4	196.4	198.8	199.2	197.6	196.8	195.3	193.2	197.4
2006	198.3	198.7	199.8	201.5	202.5	202.9	203.5	203.9	202.9	201.8	201.5	201.8	201.6	200.6	202.6
2007	202.416	203.499	205.352	206.686	207.949	208.352								205.709	

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**2.3 “Monetary Trends”, Research Department Federal Reserve Bank of St. Louis, February 2007**



## Expected Inflation Near and Far

**F**luctuations in the price of oil and other apparently non-monetary phenomena often seem to drive the near-term outlook for inflation. Nonetheless, economists widely accept the view that, over the long run, inflation is determined by monetary policy. Thus, at longer horizons, expected inflation primarily reflects the public's view of the monetary policymaker's inflation objective. Put another way, fluctuations in oil prices and other non-monetary phenomena will have less impact on the public's long-run inflation forecasts the more strongly the public sees policymakers as being committed to a particular inflation objective.

To gauge inflation expectations, analysts typically look to either surveys or market measures, such as the difference in yields on ordinary Treasury securities and inflation-protected Treasury securities (TIPS) of similar maturity. An increase in the yields on ordinary securities relative to those on TIPS would suggest that market participants have raised their forecast for inflation over the life of the securities.<sup>1</sup>

The chart plots monthly observations on the 5-year TIPS spread from January 2004 through November 2006. The spread fluctuated widely in 2004 and 2005, reflecting both volatility in oil prices and uncertainty about the economic outlook following hurricanes Katrina and Rita. More recent changes in the spread have also closely coincided with fluctuations in energy prices. A sharp decline in the spread in the second half of 2006, for example, coincided with a large decline in the price of oil from over \$74 per barrel in July to less than \$60 per barrel in October.

Although measures of near-term expected inflation, such as the 5-year TIPS spread, have moved closely with energy prices, measures of expected inflation over longer horizons have been less sensitive to fluctuations in energy prices. For example, the 5-year *forward* TIPS spread, which reflects expected inflation over the 5-year period beginning 5 years in the future, has been less closely correlated with fluctuations in oil prices than the TIPS spread covering the current 5-year period.<sup>2</sup> The 5-year forward TIPS spread, which is also shown in the chart, has ranged between 2.25 and 2.75 percent since 2004 and declined only modestly with the fall in oil prices in the second half of 2006. Survey measures of expected inflation

over long horizons, such as the Survey of Professional Forecasters by the Federal Reserve Bank of Philadelphia, have been even more stable. The median 10-year average CPI inflation forecast from the Survey of Professional Forecasters has been within 0.10 percentage points of 2.5 percent since 1999.<sup>3</sup>

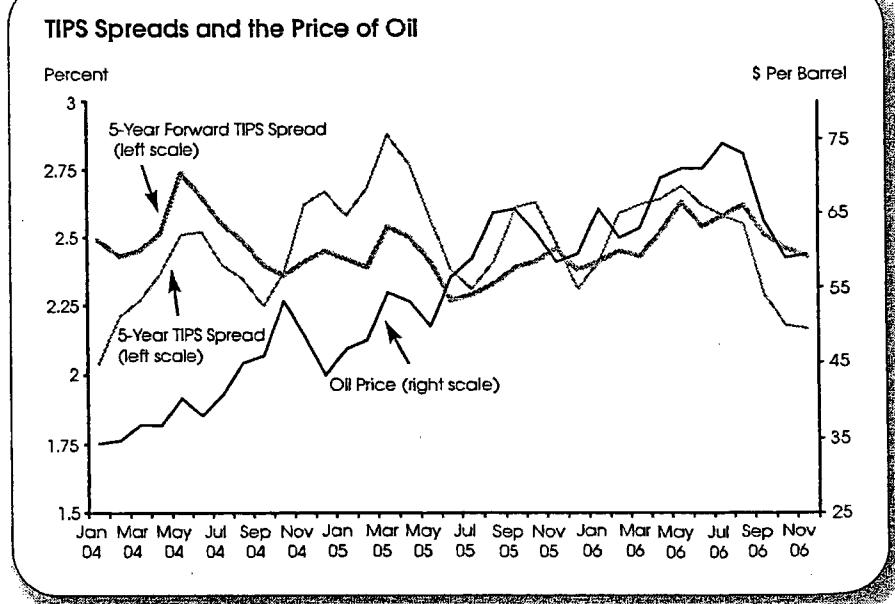
The relative stability of measures of expected inflation over longer horizons indicates that market participants view the impact of fluctuations in oil prices on inflation as largely transitory. Apparently, the public has remained convinced that the Federal Reserve is committed to keeping inflation low. If measures of long-term expected inflation were to rise significantly, it would reflect less about the price of oil than it would about the credibility of the Federal Reserve's commitment to holding inflation in check.

—David C. Wheelock

<sup>1</sup> An increase could also reflect an increase in inflation-risk premiums. For a discussion of the use of the TIPS yield spread as a measure of expected inflation, see Kevin L. Kiesen and Frank A. Schmid, "Monetary Policy Actions, Macroeconomic Data Releases, and Inflation Expectations," *Federal Reserve Bank of St. Louis Review*, May/June 2004, 86(3), pp. 9-21.

<sup>2</sup> The 5-year forward TIPS spread is obtained by dividing the total inflation expected over the entire 10 years  $[(1 + 10\text{-Yr TIPS Spread})^{10}]$  by the total inflation expected over the first 5 years  $[(1 + 5\text{-Yr TIPS Spread})^5]$  and then taking this ratio's 5th root (equivalent to raising it to the 0.2 power) to get the average annual rate.

<sup>3</sup> See [www.philadelphiared.org/econ/spf/index.html](http://www.philadelphiared.org/econ/spf/index.html).



**2.4    *Principles of Corporate Finance", Richard A. Brealy and Stewart C. Myers, McGraw Hill, Chapter 23, pp. 543-547***

## 23

## Valuing Risky Debt

How do you estimate the present value of a company's bonds? The answer is simple. You take the cash flows and discount them at the opportunity cost of capital. Therefore if a bond produces cash flows of  $C$  dollars per year for  $N$  years and is then repaid at its face value (\$1000), the present value is

$$PV = \frac{C}{1 + r_1} + \frac{C}{(1 + r_2)^2} + \cdots + \frac{C}{(1 + r_N)^N} + \frac{\$1000}{(1 + r_N)^N}$$

where  $r_1, r_2, \dots, r_N$  are the appropriate discount rates for the cash flows to be received by the bond's owner in years 1, 2, ...,  $N$ .

That is correct as far as it goes but it does not tell us anything about what determines the discount rates. For example:

1. In 1945, U.S. Treasury bills offered a return of .4 percent; In May 1987 they offered a return of 5.4 percent. Why does the same security offer radically different yields at different points in time?
2. In May 1987 the U.S. Treasury could borrow for 1 year at an interest rate of about 7 percent; But it had to pay a rate of nearly 9 percent for 20-year loans. Why do bonds maturing at different dates offer different rates of interest? In other words, why is there a *term structure* of interest rates?
3. In May 1987 the United States government could issue long-term bonds at a rate of nearly 9 percent. You could not have borrowed at that rate. Why not? What explains the premium you have to pay?

These questions lead to deep issues which will keep economists simmering for years. But we can give general answers and at the same time present some fundamental ideas.

Why should the financial manager care about these ideas? Who needs to know how bonds are priced as long as the bond market is active and efficient? Efficient markets protect the ignorant trader. If it is necessary to check whether the price is right for a proposed bond issue, you can check the prices of similar bonds. There is no need to worry about the historical behavior of interest rates, about the term structure, or about the other issues discussed in this chapter.

We do not believe that ignorance is desirable even when it is harmless. At least you ought to be able to read *The Wall Street Journal* and talk to investment bankers. More important, you will encounter many problems of bond pricing where there are no similar instruments already traded. How do you evaluate a private placement with a custom-tailored repayment schedule? How about financial leases? In Chapter 26 we will see that they are essentially debt contracts, but often extremely complicated ones, for which traded bonds are not close substitutes. You will find

that the terms, concepts, and facts presented in this chapter are essential to the analysis of these and other practical problems in financing covered in later chapters.

We start, therefore, with our first question: "Why does the general level of interest rates change over time?"

### 3-1 THE CLASSICAL THEORY OF INTEREST

#### Real Interest Rates

Suppose that everyone knows that there is not going to be any inflation. If so, all interest rates are *real* rates—they include no premium for anticipated inflation. What are the essential determinants of the rate of interest in such a world? The classical economist's answer to this question is summed up in the title of Irving Fisher's great book: *The Theory of Interest: As Determined by Impatience to Spend Income and Opportunity to Invest It.*<sup>1</sup> The real interest rate, according to Fisher, is the price which equates the supply and demand for capital. The supply depends on people's willingness to save—that is, to postpone consumption.<sup>2</sup> The demand depends on the opportunities for productive investment.

For example, suppose that investment opportunities generally improve. Firms have more good projects, and so are willing to invest more at any interest rate. Therefore, the rate has to rise to induce individuals to save the additional amount that firms want to invest.<sup>3</sup> Conversely, if investment opportunities deteriorate, there will be a fall in the real interest rate.

Fisher's theory emphasizes that the real rate of interest depends on real phenomena. A high aggregate willingness to save may be associated with such factors as high aggregate wealth (because wealthy people usually save more), an uneven distribution of wealth (an even distribution would mean fewer rich people, who do most of the saving), and a high proportion of middle-aged people (the young don't need to save and the old don't want to—"You can't take it with you"). Correspondingly, a high propensity to invest may be associated with a high level of industrial activity or major technological advances.

#### Inflation and Interest Rates

Now let us see what Irving Fisher had to say about the effect of inflation on interest rates. Suppose that consumers are equally happy with 100 apples today or 105 apples in a year's time. The real, or "apple," rate of interest is 5 percent. Suppose also that I know the price of apples will increase over the year by 10 percent. Then I will part with \$100 today if I am repaid \$115 at the end of the year. That \$115 is needed to buy me 5 percent more apples than I can get for my \$100 today. In other words, the nominal, or "money," rate of interest must equal the real, or "apple," rate plus the prospective rate of inflation. A change of one percentage point in the expected inflation rate produces a change of one percentage point in the nominal interest rate. That is Fisher's theory: A change in the expected inflation will cause the same change in the nominal interest rate.<sup>4</sup>

<sup>1</sup> Augustus M. Kelley, Publishers, New York, 1965; originally published in 1930.

<sup>2</sup> Some of this saving is done indirectly. For example, if you hold 100 shares of GM stock, and GM retains earnings of \$1 per share, GM is saving \$100 on your behalf.

<sup>3</sup> We assume that investors save more as interest rates rise. It doesn't *have* to be that way; here is an example of how a higher interest rate could mean *less* saving. Suppose that you need \$10,000 20 years hence for your children's college expenses. How much will you have to set aside today to cover this obligation? The answer is the present value of \$10,000 after 20 years, or  $10,000 / (1 + r)^{20}$ . The higher the  $r$ , the lower the present value and the less you have to set aside.

<sup>4</sup> The apple example was taken from R. Roll, "Interest Rates on Monetary Assets and Commodity Price Index Changes," *Journal of Finance*, 27: 251-278 (May 1972).

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In principle, there is no upper limit to the real rate of interest. But is there any lower limit? For example, is it possible for the money rate of interest to be 5 percent and the expected rate of inflation to be 10 percent, thus giving a negative real interest rate? If this happens, you may be able to make money in the following way. You borrow \$100 at an interest rate of 5 percent and you use the money to buy apples. You store the apples and sell them at the end of the year for \$110, which leaves you enough to pay off your loan plus \$5 for yourself.

Since easy ways to make money are rare, we can conclude that, if it doesn't cost anything to store goods, the money rate of interest is unlikely to be less than the expected rise in prices. But many goods are even more expensive to store than apples, and others cannot be stored at all (you can't store haircuts, for example). For these goods, the money interest rate can be less than the expected price rise.

**Comment.** If you look back to our discussion of inflation and discount rates in Section 6-1, you will see that our apple example is a bit oversimplified. If apples cost \$1.00 apiece today and \$1.10 next year, you need  $1.10 \times 105 = \$115.50$  next year to buy 105 apples. The money interest rate is 15.5 percent, not 15.

The exact formula relating real and money rates is

$$1 + r_{\text{money}} = (1 + r_{\text{real}})(1 + i)$$

where  $i$  is the expected inflation rate. Thus

$$r_{\text{money}} = r_{\text{real}} + i + i(r_{\text{real}})$$

In our example, the money rate should be

$$r_{\text{money}} = .05 + .10 + .10(.05) = .155$$

When we said the money rate should be 15 percent, we ignored the "cross-product" term  $i(r_{\text{real}})$ . This is a common rule of thumb, because the cross-product is usually small. But there are countries where  $i$  is large (sometimes 100 percent per year or more). In such cases it pays to use the full formula.

**Back to Fisher's Theory.** Not all economists would agree with Fisher that the real rate of interest is unaffected by the inflation rate. For example, if changes in prices are associated with changes in the level of industrial activity, then in inflationary conditions I might want more or less than 105 apples in a year's time to compensate me for the loss of 100 today.

We wish we could show you the past behavior of interest rates and *expected* inflation. Instead, we have done the next best thing and plotted in Figure 23-1 the return on U.S. Treasury bills against the *actual* inflation. Notice that between 1926 and 1986 the return on Treasury bills has been below the inflation rate about as often as it has been above. The average real interest rate during this period was .5 percent. Since 1981 the return on bills has been significantly higher than inflation. If you knew for sure whether these positive real rates will persist, you could make yourself a bundle and retire to the Caribbean.

Fisher's theory states that changes in anticipated inflation produce corresponding changes in the rate of interest. But there is little evidence of this in the 1930s and 1940s. During this period, the return on Treasury bills scarcely changed even though inflation fluctuated sharply. Either these changes in inflation were unanticipated or Fisher's theory was wrong. Since the early 1950s, there appears to have been a closer relationship between interest rates and inflation in the United

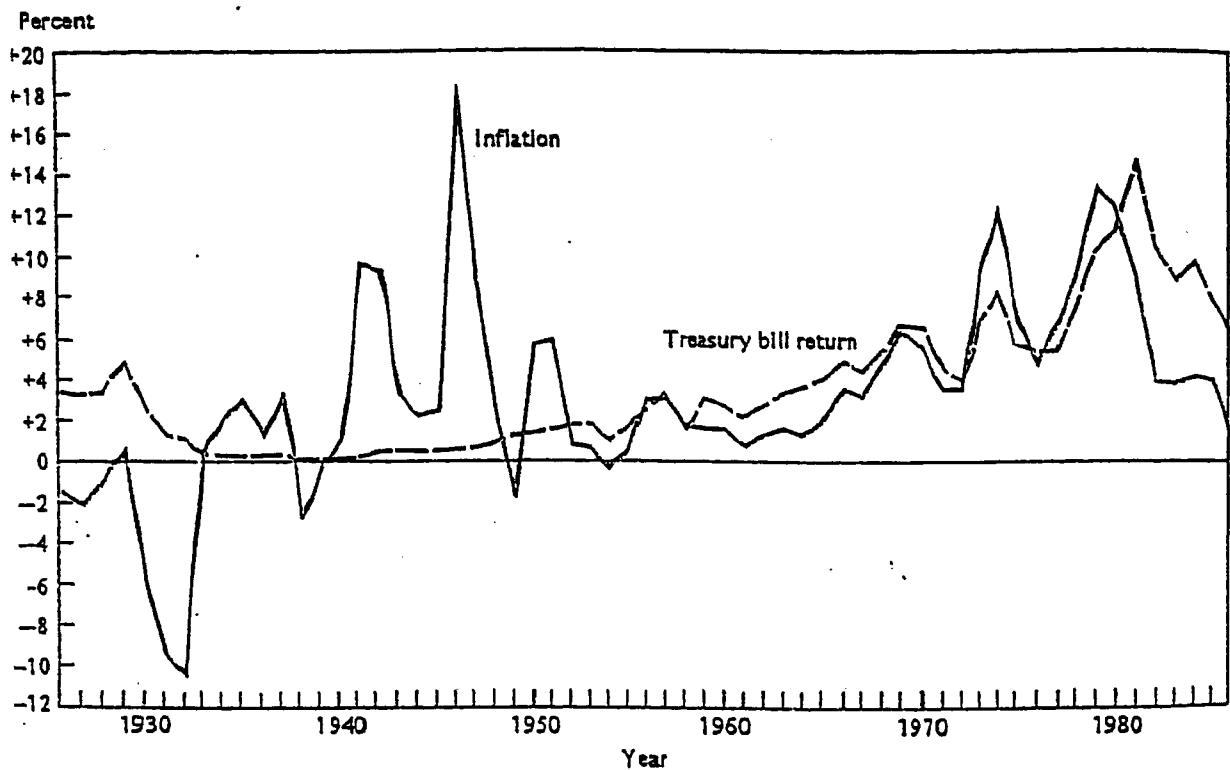


FIGURE 23-1

The return on U.S. Treasury bills and the rate of inflation 1926-1986. (Source: R. G. Ibbotson and R. A. Sinquefield, *Stocks, Bonds, Bills, and Inflation*, 1982, updated in *Stocks, Bonds, Bills, and Inflation: 1987 Yearbook*, Ibbotson Associates, Chicago, 1987.)

## 23-2 TERM ST

States.<sup>5</sup> Therefore, it is worth looking more carefully at how well Fisher's theory has worked in these recent years.

Eugene Fama has suggested that one way to test Fisher's theory is to twist it around and measure whether the inflation rate can be forecasted by subtracting a constant real rate from the observed nominal rate. That is, if Fisher's theory is right,

$$\text{Nominal interest rate} = \text{real interest rate} + \text{inflation rate forecasted by investors}$$

or

$$\text{Inflation rate forecasted by investors} = \text{nominal interest rate} - \text{real interest rate}$$

Of course, investors cannot predict the actual inflation rate perfectly—there will be a random forecast error. But in an efficient market, we expect them to be right on the average. Thus, the forecast error should be zero on the average.

<sup>5</sup> This probably reflects government policy, which before 1951 stabilized nominal interest rates. The 1951 "accord" between the Treasury and the Federal Reserve system permitted more flexible nominal interest rates after 1951.

Suppose that each quarter we observe the nominal return on Treasury bills and the *actual* rate of inflation. We fit the following equation to these data:

$$\text{Actual inflation} = a + b (\text{nominal interest rate}) + \text{random forecasting error rate}$$

If Fisher is correct, the coefficient  $b$  should be close to 1.0 and the constant term  $a$  should be equal to minus the real interest rate.

We estimated  $b$  for 1953 to 1986 as .82, which is a little less than we should expect if Fisher is right and if the real interest rate is constant.<sup>6</sup>

Before leaving this topic, we must add two qualifications. First, the real interest rate is really an *expected* rate. When you buy a Treasury bill and hold it to maturity, you know what the dollar payoff will be, but the *real* payoff is uncertain because future inflation is not wholly predictable. Thus, to be perfectly precise, we should define the real interest rate as follows:

$$\begin{aligned} \text{Real interest rate} &= \text{expected real rate of return from} \\ &\quad \text{U.S. Treasury bills} \\ &= \text{nominal rate of return on Treasury bills} \\ &\quad - \text{expected rate of inflation} \end{aligned}$$

Second, Nelson and Schwert, and Hess and Bicksler, have pointed out that the (expected) real interest rate *does* vary over time. Indeed we have seen that the real rate appears to have been unusually high since 1981. If that is so, Fama's test may be inappropriate.<sup>7</sup>

Until these problems have been resolved, we recommend that you look on Fisher's theory simply as a useful rule of thumb. Thus, if the expected inflation rate changes, your best bet is that there will be a corresponding change in the interest rate.

## 23-2 TERM STRUCTURE AND YIELDS TO MATURITY

We turn now to the relationship between short-term and long-term rates of interest. Suppose that we have a simple loan which pays \$1 at time 1. The present value of this loan is

$$PV = \frac{1}{1 + r_1}$$

Thus we discount the cash flow at  $r_1$ , the rate appropriate for a one-period loan. This rate is fixed today; it is often called today's one-period spot rate.

If we have a loan which pays \$1 at both time 1 and time 2, present value is

$$PV = \frac{1}{1 + r_1} + \frac{1}{(1 + r_2)^2}$$

<sup>6</sup> Fama fitted his equation to data for the period 1953 to 1971. His estimate of  $b$  was .98, which is almost identical to the figure that Fisher would predict. See E. F. Fama: "Short-Term Interest Rates as Predictors of Inflation," *American Economic Review*, 65: 269-282 (June 1975).

<sup>7</sup> C. R. Nelson and G. Schwert, "Short-Term Interest Rates as Predictors of Inflation: On Testing the Hypothesis that the Real Rate of Interest is Constant," *American Economic Review*, 67: 478-486 (June 1977); P. Hess and J. Bicksler, "Capital Asset Prices versus Time Series Models as Predictors of Inflation," *Journal of Financial Economics*, 2: 341-360 (December 1975).

## **2.5 “The January 17, 1994 Northridge, CA Earthquake”**

The January 17, 1994 Northridge, CA Earthquake  
An EQE Summary Report, March 1994

#### Residential Buildings



*Right: One of the many collapsed apartment buildings that caused several deaths in this earthquake. Many of these buildings had only stucco over wood framing and large open areas on the ground floor; thus they had little capability to resist lateral forces.*

*Left: This apartment connected two buildings in an apartment complex in Sherman Oaks. The building to the right collapsed.*

City and county building inspectors estimated that 82% of all structures rendered uninhabitable by the earthquake were residential. Of these, 77% were apartments and condominiums, and the remaining 23% were single-family dwellings. A week after the earthquake, approximately 14,600 dwelling units were deemed uninhabitable (red or yellow tagged).

Severe structural damage to residences was found as far away as the Santa Clarita Valley to the north, south-central Los Angeles to the south, Azusa to the east, and eastern Ventura County to the west.



*A collapsed three-story apartment building in Van Nuys. The upper two-story wood-frame structure collapsed onto an inadequate concrete-block wall and cast-in-place, concrete column, platform garage.*

#### Multi-family Dwellings

Particularly vulnerable were low-rise, multi-story, wood-frame apartment structures with a soft (very flexible) first story and an absence of plywood shear walls. The soft-first-story condition was most apparent in buildings with parking garages at the first-floor level. Such buildings, with large, often continuous openings for parking, did not have enough wall area and strength to withstand the earthquake forces. The lack of first-floor stiffness and strength led to collapse of the first floor of many structures throughout the valley.

The main reason for failure was the lack of adequate bracing, such as broad plywood shear walls. Most older wood-frame structures had poor if any seismic designs and resisted lateral forces using stucco, plaster and gypsum board wall paneling, and diagonal let-in bracing. Of the multi-unit dwellings investigated by EQE that were deemed uninhabitable, all were found to lack full-height plywood shear walls, including units less than 10 years old. Reportedly, some newer buildings with overly slender plywood walls also performed poorly. However, buildings containing steel moment-resisting frames at the first-floor level appeared to survive with only surficial stucco cracks.

Another vulnerable configuration was the multi-story wood-frame structure atop a platform or podium constructed of reinforced concrete or masonry walls and intermediate reinforced concrete columns, which accommodates garages. One such building collapsed when the interior concrete columns of the garage failed and/or punched through the garage roof slab, allowing the upper structure to collapse.

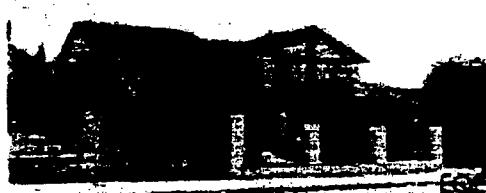
Many hundreds of apartment buildings were severely damaged. Entire neighborhoods in Sherman Oaks and to the east of California State University, Northridge, were essentially destroyed by the earthquake. Had the earthquake been slightly larger, many more collapses could have occurred and the life losses could have been much greater. All of the buildings that were observed after collapse could have easily been strengthened at moderate cost. These were the structures that caused the most deaths from building collapse during this earthquake. It is doubtful that many of these structures, which are found throughout California, will be strengthened voluntarily. It is most likely that legislation will be required to upgrade the many thousands of such structures in the state.



*Two apartment buildings in the epicentral area that collapsed onto ground-floor open garage areas with little or no lateral resistance.*

#### Single-family Dwellings

Widespread damage to unbolted houses and to older houses with cripple-stud foundations occurred. Newer houses on slab-on-grade foundations were severely damaged because they were inadequately anchored.



*A single-family home in Granada Hills, adjacent to possible surface faulting, with a fallen chimney and roof tile damage. The interior sheetrock walls were extensively cracked.*

Damage to masonry chimneys; tall, poorly fastened wood chimneys; and masonry-block walls was widespread, occurring as far away as Santa Monica, Thousand Oaks, and Santa Clarita. Poorly reinforced and unreinforced masonry fences collapsed throughout the valley. Many streets were lined with such debris.

Two-story houses without any plywood sheathing typically had extensive cracking of interior sheetrock, particularly on the second floor. In such houses, the contents on the second floor were usually damaged much more extensively. Adding plywood shear panels at strategic locations in a house substantially improves the seismic performance of the building, and would have eliminated most of the observed serious structural and nonstructural damage to wood-frame houses and smaller wood-frame commercial buildings.

Nine hillside houses built on stilts in Sherman Oaks collapsed. All but one of the homes were constructed in the 1960s—predating the major building code revisions made after the 1971 San Fernando Earthquake. At least 14 people slid downhill with their homes: four were killed.

A very high percentage of wood-frame houses performed well in the earthquake. Most of the damage to such buildings was nonstructural in nature and easily repairable. More than a week after the earthquake, many people still slept in tents outside their structurally undamaged homes. The main reason for this was fear induced by inconsequential cracks in sheetrock and other finishes, and various fallen interior furnishings and decorations, which wreaked havoc on the interiors of many homes.



*This large mobile home development in San Fernando had at least five separate fires, all caused by mobile homes coming off of their foundations and severing gas lines. The rate of ignitions in mobile home parks was much higher than for housing developments. The rate is higher because in some mobile home parks, as many as 95% of the homes collapsed off of their supports.*

#### **Mobile Homes and Implications for Fire Following**

As with all other damaging U.S. earthquakes, the most widespread damage to mobile homes was caused

by the homes' falling off of their temporary foundations. In Santa Clarita, located approximately 25 km northeast of the epicenter, almost half of the 3,000 mobile homes shook off of their pedestal foundations.

Seismic damage to mobile homes can be mitigated by providing permanent foundations or bracing the temporary foundation pedestals, installing positive connections from the superstructure to the pedestals, and installing steel straps to connect independent sections of multi-sectional dwellings.

Detachment of the structures from the foundation had disastrous effects on utility lines, especially gas and propane. Between 100 and 150 mobile homes were consumed by multiple fires at three separate San Fernando Valley mobile home parks when gas lines and propane tanks ruptured. The affected mobile home parks were typically along the periphery of the San Fernando Valley. If the east-to-west Santa Ana winds had been blowing at the time of the earthquake, the multiple fires would have been very difficult to control and could have easily caused one or more conflagrations, resulting in even greater loss.

This effect has wide-ranging implications for fire following earthquakes. The Northridge Earthquake showed that ignitions from mobile homes occur at a much higher rate than do those in houses and other fixed buildings. Therefore, areas with many such parks would be expected to have a higher probability for initiation of major fires.

Return to Northridge Summary Report Table of Contents page

Return to Fire Marshal's Home page

## *Appendix 3*

- 3.1    *RealtyRates.com Investor Survey***
- 3.2    *Principles of Corporate Finance", Richard A. Brealey and Stewart C. Myers, McGraw Hill, pp 49-55 Chapter 4***
- 3.3    *Principles of Corporate Finance", Richard A. Brealey and Stewart C. Myers, McGraw Hill, pp 131-143 Chapter 7***
- 3.4    *Partnership Profiles, "2007 Rate of Return Study, Publicly-Held Real Estate Limited Partnerships and Real Estate Investment Trusts***

### **3.1    *RealtyRates.com Investor Survey***

RealtyRates.com DEVELOPER SURVEY - 2nd Quarter 2007*						
National - Subdivisions & PUDs						
	Actual Rates			Pro-Forma Rates		
	Min	Max	Avg	Min	Max	Avg
<b>Site-Built Residential</b>	13.54%	43.03%	25.14%	13.00%	41.31%	23.97%
-100 Units	13.54%	37.10%	24.00%	13.00%	35.61%	23.82%
100-500 Units	13.88%	40.81%	26.25%	13.24%	39.17%	25.16%
500+ Units	14.22%	42.66%	27.30%	13.26%	40.96%	25.48%
Mixed Use	14.56%	43.03%	27.64%	13.58%	41.31%	25.25%
<b>Manufactured Housing</b>	13.82%	42.98%	25.30%	13.27%	41.26%	24.14%
-100 Units	13.82%	37.37%	24.57%	13.27%	35.88%	24.08%
100-500 Units	14.16%	41.11%	26.53%	13.51%	39.47%	25.43%
500+ Units	14.51%	42.88%	27.59%	13.54%	41.26%	25.75%
<b>Business Parks</b>	13.91%	43.39%	25.62%	13.36%	41.66%	24.35%
-100 Acres	13.91%	37.73%	24.79%	13.36%	36.22%	24.29%
100-500 Acres	14.26%	41.50%	26.77%	13.60%	39.84%	25.65%
500+ Acres	14.61%	43.39%	27.84%	13.83%	41.66%	25.98%
<b>Industrial Parks</b>	13.81%	44.09%	25.76%	13.36%	42.33%	24.57%
-100 Acres	13.91%	38.34%	25.03%	13.36%	36.81%	24.53%
100-500 Acres	14.26%	42.18%	27.03%	13.60%	40.49%	25.91%
500+ Acres	14.61%	44.09%	28.12%	13.63%	42.33%	26.24%

\*1st Quarter 2007 Data

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## Condominiums and Co-Ops

The following summarizes discount rates for conventionally financed condominium and co-op projects nationwide. Actual Rates are historical rates achieved by survey respondents, while Pro-Forma Rates reflect forward-looking revenue and expenses and developer's profit is treated as an expense.

RealtyRates.com DEVELOPER SURVEY - 2nd Quarter 2007*						
National - Condominiums & Co-Ops						
	Actual Rates			Pro-Forma Rates		
	Min	Max	Avg	Min	Max	Avg
<b>Primary Residential</b>	11.76%	25.64%	17.65%	11.21%	24.62%	16.79%
Hi-Rise/Urban Townhouse	12.20%	25.57%	18.51%	11.63%	24.55%	17.73%
Garden/Suburban Townhouse	11.76%	24.30%	17.31%	11.21%	23.32%	16.58%
Mixed Use	12.23%	25.64%	18.18%	11.25%	24.62%	17.22%
<b>Resort &amp; Second Home</b>	12.98%	26.77%	18.87%	12.38%	25.70%	18.02%
Hi-Rise	13.13%	26.77%	19.55%	12.52%	25.70%	18.72%
Garden/Townhouse	12.99%	26.38%	18.89%	12.38%	25.32%	18.10%
<b>Commercial/Industrial</b>	12.27%	27.02%	18.12%	11.70%	25.94%	17.30%
Urban Office	12.29%	25.33%	18.43%	11.72%	24.32%	17.66%
Suburban Office	12.27%	25.38%	18.07%	11.70%	24.37%	17.31%
Retail	12.64%	27.02%	19.04%	12.06%	25.94%	18.24%
Industrial	12.27%	26.08%	18.40%	11.70%	25.03%	17.63%

\*1st Quarter 2007 Data

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RealtyRates.com INVESTOR SURVEY - 2nd Quarter 2007 <sup>*</sup>													
CURRENT & HISTORICAL CAP RATE INDICES													
Year	Method-Weighted Property Category Indices												Weighted Composite Index
	Healthcare	Senior Housing	Ind.	Lodging	Camping	Office	Retail	Restaurant	Self Storage	Special Purpose			
2007	8.90	12.02	9.58	9.62	10.58	9.45	9.44	9.27	10.93	10.03	11.32	11.32	9.81
1st Qtr.	8.90	12.02	9.58	9.62	10.58	9.45	9.44	9.27	10.93	10.03	11.32	11.32	9.81
2006	9.26	11.93	10.18	9.77	10.77	9.63	9.72	9.32	11.24	10.31	11.53	11.53	10.03
4th Qtr.	8.86	11.95	9.53	9.58	10.51	9.25	9.41	9.21	10.65	9.98	11.25	11.25	9.75
3rd Qtr.	9.37	12.04	10.39	9.81	10.84	9.71	9.77	9.30	11.38	10.35	11.64	11.64	10.10
2nd Qtr.	9.52	12.02	10.54	9.95	11.04	9.89	9.91	9.49	11.52	10.53	11.78	11.78	10.25
1st Qtr.	9.30	11.69	10.24	9.74	10.70	9.58	9.80	9.28	11.21	10.39	11.44	11.44	10.02
2005	9.14	11.46	10.03	9.42	10.50	9.22	9.46	9.02	11.06	10.04	11.44	11.44	9.77
2004	9.00	10.66	10.19	9.72	10.71	9.03	9.40	8.86	11.01	9.91	11.74	11.74	9.75
2003	9.19	10.38	10.56	9.53	11.69	9.51	9.44	9.05	11.16	10.04	12.04	12.04	9.94
2002	9.21	10.70	9.92	9.20	11.13	9.62	9.43	9.23	11.08	10.57	10.99	10.99	9.82
2001	9.61	10.52	10.31	9.81	10.87	10.22	9.78	9.85	11.11	10.69	12.76	12.76	10.23
2000	8.97	9.19	9.41	9.55	9.89	10.90	10.13	10.38	10.64	10.56	12.44	12.44	10.01
1999	7.94	8.14	8.34	8.54	8.76	9.65	8.97	8.19	8.42	9.35	11.02	11.02	8.87
1998	8.71	8.93	9.15	9.37	9.60	10.59	9.84	10.08	10.33	10.26	12.09	12.09	9.73
1997	8.45	8.68	8.88	9.10	9.32	10.28	9.55	9.79	10.03	9.96	11.73	11.73	9.44
1996	8.47	8.70	8.93	9.17	9.41	10.46	9.66	9.92	10.19	10.06	11.92	11.92	9.54
1995	9.22	9.45	9.68	9.92	10.17	11.21	10.42	10.68	10.94	10.86	12.80	12.80	10.30
1994	9.15	10.37	11.63	12.92	12.74	13.94	12.05	11.35	12.63	12.84	14.78	14.78	11.90
1993	9.15	10.37	11.63	12.92	12.74	13.94	12.05	11.35	12.63	12.84	14.78	14.78	11.90
1992	9.66	10.90	12.17	13.47	13.30	14.56	12.63	11.94	13.24	13.45	15.49	15.49	12.48

<sup>\*</sup>Weighted by methodology: Band-of-investment DCR Technique, Sales Survey

<sup>\*\*</sup>Further weighted by property category

\* 1st Quarter 2007 Data

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3.2 *Principles of Corporate Finance", Richard A. Brealy and Stewart C. Myers, McGraw Hill, 49-55, Chapter 4*

In this chapter we again assume that investors use the same rate to discount cash flows occurring in different years. That does not matter as long as short-term rates are approximately the same as long-term rates. But often when we value bonds we must discount each cash flow at a different rate. There will be more about that in Chapter 23.

### HOW COMMON STOCKS ARE VALUED

Today's Price

The cash payoff to owners of common stocks comes in two forms: (1) cash dividends and (2) capital gains or losses. Usually investors expect to get some of each. Suppose that the current price of a share is  $P_0$ , that the expected price at the end of a year is  $P_1$ , and that the expected dividend per share is  $DIV_1$ . The rate of return that investors expect from this share over the next year is defined as the expected dividend per share  $DIV_1$  plus the expected price appreciation per share  $P_1 - P_0$ , all divided by the price at the start of the year  $P_0$ :

$$\text{Expected return} = r = \frac{DIV_1 + P_1 - P_0}{P_0}$$

This return that is expected by investors is often called the **market capitalization rate**.

Let us now see how our formula works. Suppose Fledgling Electronics stock is selling for \$100 a share ( $P_0 = 100$ ). Investors expect a \$5 cash dividend over the next year ( $DIV_1 = 5$ ). They also expect the stock to sell for \$110 a year hence ( $P_1 = 110$ ). Then the expected return to the stockholders is 15 percent:

$$r = \frac{5 + 110 - 100}{100} = .15, \text{ or } 15\%$$

Correspondingly, if you are given investors' forecasts of dividend and price and the expected return offered by other equally risky stocks, you can predict today's price:

$$\text{Price} = P_0 = \frac{DIV_1 + P_1}{1 + r}$$

For Fledgling Electronics  $DIV_1 = 5$  and  $P_1 = 110$ . If  $r$ , the expected return on securities in the same "risk class" as Fledgling, is 15 percent, then today's price should be \$100:

$$P_0 = \frac{5 + 110}{1.15} = \$100$$

How do we know that \$100 is the right price? Because no other price could survive in competitive capital markets. What if  $P_0$  were above \$100? Then Fledgling stock would offer an expected rate of return that was *lower* than other securities of equivalent risk. Investors would shift their capital to the other securities and in the process would force down the price of Fledgling stock. If  $P_0$  were less than \$100, the process would reverse. Fledgling's stock would offer a *higher* rate of return than comparable securities. In that case, investors would rush to buy, forcing the price up to \$100.

The general conclusion is that at each point in time *all securities in an equivalent risk class are priced to offer the same expected return*. This is a condition for equilibrium in well-functioning capital markets. It is also common sense.

But What  
Determines  
Next Year's  
Price?

We have managed to explain today's stock price  $P_0$  in terms of the dividend  $DIV_1$  and the expected price next year  $P_1$ . Future stock prices are not easy things to forecast directly. But think about what determines next year's price. If our price formula holds now, it ought to hold then as well:

$$P_1 = \frac{DIV_2 + P_2}{1 + r}$$

That is, a year from now investors will be looking out at dividends in year 2 and price at the end of year 2. Thus we can forecast  $P_1$  by forecasting  $DIV_2$  and  $P_2$  and we can express  $P_0$  in terms of  $DIV_1$ ,  $DIV_2$ , and  $P_2$ :

$$P_0 = \frac{1}{1 + r} (DIV_1 + P_1) = \frac{1}{1 + r} \left( DIV_1 + \frac{DIV_2 + P_2}{1 + r} \right) = \frac{DIV_1}{1 + r} + \frac{DIV_2 + P_2}{(1 + r)^2}$$

Take Fledgling Electronics. A plausible explanation why investors expect its stock price to rise by the end of the first year is that they expect higher dividends and still more capital gains in the second. For example, suppose that they are looking today for dividends of \$5.50 in year 2 and a subsequent price of \$121. That would imply a price at the end of year 1 of

$$P_1 = \frac{5.50 + 121}{1.15} = \$110$$

Today's price can then be computed either from our original formula

$$P_0 = \frac{DIV_1 + P_1}{1 + r} = \frac{5.00 + 110}{1.15} = \$100$$

or from our expanded formula

$$P_0 = \frac{DIV_1}{1 + r} + \frac{DIV_2 + P_2}{(1 + r)^2} = \frac{5.00}{1.15} + \frac{5.50 + 121}{(1.15)^2} = \$100$$

We have succeeded in relating today's price to the forecasted dividends for 2 years ( $DIV_1$  and  $DIV_2$ ) plus the forecasted price at the end of the *second* year ( $P_2$ ). You will probably not be surprised to learn that we could go on to replace  $P_2$  by  $(DIV_3 + P_3)/(1 + r)$  and relate today's price to the forecasted dividends for 3 years ( $DIV_1$ ,  $DIV_2$ , and  $DIV_3$ ) plus the forecasted price at the end of the *third* year ( $P_3$ ). In fact we can look as far out into the future as we like, removing  $P$ 's year ( $P_H$ ). Let us call this final period  $H$ . This gives us a general stock price formula as we go.

$$P_0 = \frac{DIV_1}{1 + r} + \frac{DIV_2}{(1 + r)^2} + \cdots + \frac{DIV_H + P_H}{(1 + r)^H}$$

$$= \sum_{i=1}^H \frac{DIV_i}{(1 + r)^i} + \frac{P_H}{(1 + r)^H}$$

The expression  $\sum_{i=1}^H$  simply means the sum of the discounted dividends from year 1 to year  $H$ .

Table 4-1 continues the Fledgling Electronics example for various time horizons, assuming that the dividends are expected to increase at a steady 10 percent compound rate. The expected price  $P_i$  increases at the same rate each year. Each line in the table represents an application of our general formula for a different value of  $H$ . Figure 4-1 provides a graphical representation of the table. Each column shows the present value of the dividends up to the time horizon and the present

**TABLE 4-1**  
Applying the stock valuation formula to Fledgling Electronics

Horizon Period ( $H$ )	EXPECTED FUTURE VALUES		PRESENT VALUES		
	Dividend ( $DIV_i$ )	Price ( $P_i$ )	Cumulative Dividends	Future Price	Total
0	—	100	—	100.00	100
1	5.00	110	4.35	95.65	100
2	5.50	121	8.51	91.49	100
3	6.05	133.10	12.48	87.52	100
4	6.66	146.41	16.29	83.71	100
10	11.79	259.37	35.89	64.11	100
20	30.58	672.75	58.89	41.11	100
50	533.59	11,739.09	89.17	10.83	100
100	62,639.15	1,378,061.23	98.83	1.17	100

*Assumptions:*

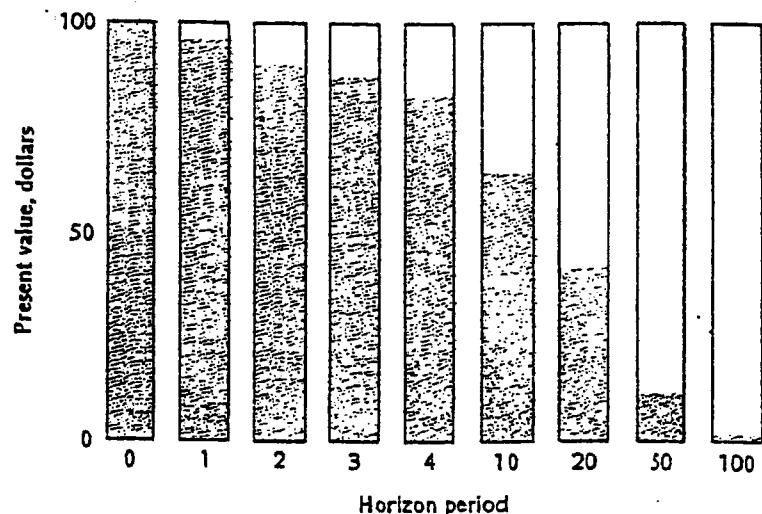
1. Dividends increase at 10 percent per year, compounded.
2. Capitalization rate is 15 percent.

value of the price at the horizon. As the horizon recedes, the dividend stream accounts for an increasing proportion of present value, but the *total* present value of dividends plus terminal price always equals \$100.

How far out could we look? In principle the horizon period  $H$  could be infinitely distant. Common stocks do not expire of old age. Barring such corporate hazards as bankruptcy or acquisition, they are immortal. As  $H$  approaches infinity, the present value of the terminal price ought to approach zero, as it does in the final column of Figure 4-1. We can, therefore, forget about the terminal price entirely and express today's price as the present value of a perpetual stream of cash dividends. This is usually written as

$$P_0 = \sum_{i=1}^{\infty} \frac{DIV_i}{(1 + r)^i}$$

**FIGURE 4-1**  
As your horizon recedes, the present value of the future price (shaded area) declines but the present value of the stream of dividends (unshaded area) increases. The *total* present value (future price and dividends) remains the same.



where the sign  $\infty$  is used to indicate infinity. This discounted cash flow (DCF) formula for the present value of a stock is just the same as it is for the present value of any other asset. We just discount the cash flows—in this case the dividend stream—by the return that can be earned in the capital market on securities of comparable risk. Some find the DCF formula implausible because it seems to ignore capital gains. But we know that the formula was *derived* from the assumption that price in any period is determined by expected dividends *and* capital gains over the next period.

Remembering our rule about adding present values, we might be tempted to conclude that the *total* value of a company's common stock must be equal to the discounted stream of *all* future dividends paid by the company. But we need to be a little careful here. We must only include the dividends that will be paid on *existing* stock. The company may at some future date decide to sell more stock and this will be entitled to its share of the subsequent dividend stream. The total value of a company's existing common stock is, therefore, equal to the discounted value of that *portion* of the total dividend stream which will be paid to the stock outstanding today. It sounds obvious but it is surprising how often people forget.

#### 4-3 A SIMPLE WAY TO ESTIMATE THE CAPITALIZATION RATE

In Chapter 3 we encountered some simplified versions of the basic present value formula. Let us see whether they offer any insights into stock values. Suppose, for example, that we forecast a constant growth rate for a company's dividends. This does not preclude year-to-year deviations from the trend: it means only that *expected* dividends grow at a constant rate. Such an investment would be just another example of the growing perpetuity that we helped our fickle philanthropist to evaluate in the last chapter. To find its present value we must divide the annual cash payment by the difference between the discount rate and the growth rate:

$$P_0 = \frac{DIV_1}{r - g}$$

Remember that we can use this formula only when  $g$ , the anticipated growth rate, is less than  $r$ , the discount rate. As  $g$  approaches  $r$ , the stock price becomes infinite. Obviously  $r$  must be greater than  $g$  if growth really is perpetual.

Our growing perpetuity formula explains  $P_0$  in terms of next year's expected dividend  $DIV_1$ , the projected growth trend  $g$ , and the expected rate of return on other securities of comparable risk  $r$ . Alternatively, the formula can be used to obtain an estimate of  $r$  from  $DIV_1$ ,  $P_0$ , and  $g$ :

$$r = \frac{DIV_1}{P_0} + g$$

The market capitalization rate equals the dividend yield ( $DIV_1/P_0$ ) plus the expected rate of growth in dividends ( $g$ ).

These two formulas are much easier to work with than the general statement that "price equals the present value of expected future dividends."<sup>2</sup> For instance, imagine that you are analyzing Sears, Roebuck and Company early in 1986 when

<sup>2</sup> These formulas were first developed in 1938 by Williams and were rediscovered by Gordon and Shapiro. See J. B. Williams, *The Theory of Investment Value*, Harvard University Press, Cambridge, Mass., 1938; and M. J. Gordon and E. Shapiro, "Capital Equipment Analysis: The Required Rate of Profit," *Management Science*, 3:102-110 (October 1956).

its stock is selling for about \$45 a share. Dividend payments for 1986 are expected to be \$1.76 a share. Now we can calculate the first half of our formula:

$$\text{Dividend yield} = \frac{\text{DIV}_1}{P_0} = \frac{1.76}{45} = .039$$

The hard part is to estimate  $g$ . One line of reasoning starts with Sears's payout ratio, the ratio of dividends to earnings per share (EPS). This has generally been around 45 percent. In other words, each year Sears plows back into the business about 55 percent of earnings per share:

$$\text{Plowback ratio} = 1 - \text{payout ratio} = 1 - \frac{\text{DIV}_1}{\text{EPS}_1} = 1 - .45 = .55$$

Also, Sears's ratio of earnings per share to book equity per share is about 13 percent. This is its return on equity, or ROE:

$$\text{Return on equity} = \text{ROE} = \frac{\text{EPS}_1}{\text{book equity per share}} = .13$$

Sears has always been a stable company, and it may not be too unreasonable to assume that these relationships will continue to hold. Suppose we forecast that Sears will earn 13 percent of book equity and reinvest 55 percent of that. Then book equity will increase by  $.55 \times .13 = .072$ . Since we assumed that the return on equity and the payout ratio are constant, earnings and dividends per share will also increase by 7.2 percent:

$$\text{Dividend growth rate} = g = \frac{\text{plowback ratio}}{\text{ROE}} = .55 \times .13 = .072$$

Now you have your estimate of the market capitalization rate (i.e., the rate of return that investors use to discount Sears's future dividends):

$$r = \frac{\text{DIV}_1}{P_0} + g = .039 + .072 = .111, \text{ or about } 11\%$$

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Using the  
DCF Model to  
Set Electricity  
Prices

Although our estimate of the market capitalization rate for Sears stock seems reasonable enough, there are obvious dangers in analyzing any single firm's stock with such simple rules of thumb as the constant-growth DCF formula. First, the underlying assumption of regular future growth is at best an approximation. Second, even if it is an acceptable approximation, errors inevitably creep into the estimate of  $g$ . Remember, however, that  $r$  is not the personal property of Sears: in well-functioning markets investors must capitalize the dividends of *all* securities in Sears's risk class at exactly the same rate. This means that we may do better to take a large sample of securities of equivalent risk, estimate  $r$  for each, and use the average of our estimates. Here is a practical example.

One task of the U.S. Federal Energy Regulatory Commission (FERC) is to set prices for interstate sales of electric power. These are almost always wholesale transactions. That is, an electric utility with surplus generating capacity will sell power to a utility in a neighboring state. The buyer may have a shortage of capacity or it may not be able to produce electricity as cheaply as the seller.

The sale price is supposed to cover all costs of producing and transporting the electricity, including interest and tax payments, *and* to provide a reasonable profit for the seller. What is "reasonable"? It is the profit that provides a fair rate of return to the seller on its equity investment in generating equipment, transmission lines, and so on. What is a "fair" rate of return? It is usually interpreted as  $r$ , the market capitalization rate for the selling firm's common stock. That is, the expected rate of return on investments made by electric utilities ought to be the same rate offered by securities having risks equivalent to the utility's common stock.<sup>3</sup>

Thus, FERC's problem of determining fair profits boils down to estimating  $r$  for the common stock of the electric utilities it regulates. This is done case by case, as each utility appears before FERC to justify its prices for interstate sales. The case-by-case analyses typically rely on DCF formulas.

FERC also calculates quarterly a "generic" or "benchmark" estimate of  $r$  for the electric utility industry. In July 1986, for example, the benchmark was

$$r = \frac{DIV_1}{P_0} + g$$

$$= .0764 + .0454 = .1218, \text{ or about } 12\%^4$$

---

### Some Warnings about Constant-Growth Formulas

These simple constant-growth DCF formulas are extremely useful rules of thumb, but they are no more than that. Naive trust in the formulas has led many financial analysts to silly conclusions.

First, remember the difficulty of estimating  $r$  by analysis of one stock only. Try to use a large sample of equivalent-risk securities. Even that may not work, but at least it gives the analyst a fighting chance, because the inevitable errors in estimating  $r$  for a single security tend to balance out across a broad sample.

Second, resist the temptation to apply the formula to firms having high current rates of growth. Such growth can rarely be sustained indefinitely, but the constant-growth DCF formula assumes it can. This erroneous assumption leads to an overestimate of  $r$ .

Consider Growth-Tech, Inc., a firm with  $DIV_1 = \$0.50$  and  $P_0 = \$50$ . That firm has plowed back 80 percent of earnings and has had a return on equity (ROE) of 25 percent. This means that *in the past*

$$\text{Dividend growth rate} = \text{plowback ratio} \times \text{ROE} = .80 \times .25 = .20$$

The temptation is to assume that the future long-term growth rate ( $g$ ) also equals .20. This would imply

$$r = \frac{.50}{50.00} + .20 = .21$$

<sup>3</sup> This is the accepted interpretation of the U.S. Supreme Court's directive in 1944 that "... the returns to the equity owner [of a regulated business] should be commensurate with returns on investments in other enterprises having corresponding risks." *Federal Power Commission v. Hope Natural Gas Company*, 302 U.S. 591 at 603.

<sup>4</sup> We say "about 12 percent" because it's pointless to pretend that expected returns can be estimated to four decimal places. Utilities and regulators find themselves arguing about these decimal places, however. If a utility has a \$1 billion equity investment, that .18 percent amounts to  $.0018 \times (1,000,000,000) = \$1,800,000$ , or \$1.8 million *per year*.

The 12.18 percent estimate of  $r$  was published by FERC in "Notice of Benchmark Rate of Return on Common Equity for Public Utilities," July 16, 1986. The estimate was based on dividend yields and forecasted dividend growth rates for a sample of 99 electric utility common stocks.

But this is silly. No firm can continue growing at 20 percent per year forever, except possibly under extreme inflationary conditions. Eventually, profitability will fall and the firm will respond by investing less.

In real life the return on investment will decline *gradually* over time, but for simplicity let's assume it suddenly drops to 16 percent at year 3 and the firm responds by plowing back only 50 percent of earnings. Then  $g$  drops to  $.50(.16) = .08$ .

Table 4-2 shows what's going on. Growth-Tech starts year 1 with assets of \$10.00. It earns \$2.50, pays out 50 cents as dividends, and plows back \$2. Thus it starts year 2 with  $$10 + 2 = \$12$ . After another year at the same ROE and payout, it starts year 3 with equity of \$14.40. However ROE drops to .16 and the firm earns only \$2.30. Dividends go up to \$1.15, because the payout ratio increases, but the firm has only \$1.15 to plow back. Therefore subsequent growth in earnings and dividends drops to 8 percent.

Now we can use our general DCF formula to find the capitalization rate  $r$ :

$$P_0 = \frac{DIV_1}{1+r} + \frac{DIV_2}{(1+r)^2} + \frac{DIV_3 + P_3}{(1+r)^3}$$

Investors in year 3 will view Growth-Tech as offering 8 percent per year dividend growth. We will apply the constant-growth formula:

$$P_3 = \frac{DIV_4}{r - .08}$$

$$P_0 = \frac{DIV_1}{1+r} + \frac{DIV_2}{(1+r)^2} + \frac{DIV_3}{(1+r)^3} + \frac{1}{(1+r)^3} \frac{DIV_4}{r - .08}$$

$$= \frac{.50}{1+r} + \frac{.60}{(1+r)^2} + \frac{1.15}{(1+r)^3} + \frac{1}{(1+r)^3} \frac{1.24}{r - .08}$$

We have to use trial and error to find the value of  $r$  that makes  $P_0$  equal \$50. It turns out that the  $r$  implicit in these more realistic forecasts is approximately .099, quite a difference from our "constant-growth" estimate of .21.

A final warning. Do not use the simple constant-growth formula to test whether the market is correct in its assessment of a stock's value. If your estimate of the

TABLE 4-2

Forecasted earnings and dividends for Growth-Tech. Note the changes in year 3: ROE and earnings drop, but payout ratio increases, causing a big jump in dividends. However subsequent growth in earnings and dividends falls to 8 percent per year. Note that the increase in equity equals the earnings not paid out as dividends.

Year	1	2	3	4
Book equity	10.00	12.00	14.40	15.55
Earnings per share, EPS	2.50	3.00	2.30	2.49
Return on equity, ROE	.25	.25	.16	.16
Payout ratio	.20	.20	.50	.50
Dividends per share, DIV	.50	.60	1.15	1.24
Growth rate of dividends	—	.20	.92	.08

3.3 *Principles of Corporate Finance", Richard A. Brealey and Stewart C. Myers, McGraw Hill, pp 131-143 Chapter 7*

Portfolio	Standard Deviation $\sigma$	Variance $\sigma^2$
Treasury bills	3.4	11.6
Long-term government bonds	8.2	67.2
Corporate bonds	8.3	68.9
Common stocks	21.2	449.4

You may find it interesting to compare the coin-tossing game and the stock market as alternative investments. The stock market generated an average annual return of 12.0 percent with a standard deviation of 21.2 percent. The game offers 10 and 21 percent, respectively—slightly lower return, and about the same variability. Your gambling friends may have come up with a crude representation of the stock market.

Of course there is no reason why the market's variability should stay the same over a full 60-year period. For example, it is less now than in the Great Depression of the 1930s, but for the most part the degree of year-to-year variability has been reasonably stable at least since the 1950s. Here are standard deviations of the returns on Ibbotson Associates' market portfolio for successive 10-year periods starting in 1926:

Period	Market Standard Deviation $\sigma_m$
1926-1935	33.5
1936-1945	23.9
1946-1955	18.1
1956-1965	16.5
1966-1975	19.7
1976-1985	14.2

We can calculate our measures of variability just as well for individual securities as for portfolios of securities. Of course, 60-year averages are less interesting for specific companies than for the market portfolio—it is a rare company that faces the same business risks today as it did in 1926.

Table 7-3 presents estimated standard deviations for 10 well-known common stocks for a recent 5-year period.<sup>9</sup> The stocks in the left-hand column are "blue-chips," issued by big, established companies; those in the right-hand column are for smaller firms in the same industries.

Do the standard deviations given in Table 7-3 look "high" to you? They should. Remember that the market portfolio's standard deviation was 21.2 percent over the 1926-1985 period. Of our individual stocks only Exxon, Bristol Myers, and General Mills had lower standard deviations than the market portfolio. Most stocks

<sup>9</sup> These estimates are derived from *monthly* rates of return. Five annual observations are insufficient for estimating variability. We converted the monthly variance into an annual variance by multiplying by 12. That is, the variance of the monthly return is about one-twelfth of the annual variance. The longer you hold a security or portfolio, the more risk you have to bear.

This conversion assumes that successive monthly returns are statistically independent. This is, in fact, a good assumption, as we will show in Chapter 13.

Because variance is approximately proportional to the length of time interval over which a security or portfolio return is measured, standard deviation is about proportional to the square root of the interval.

TABLE 7-3  
Standard deviations for selected common stocks, 1981-1986 (figures in percent per year)

Stock	Standard Deviation	Stock	Standard Deviation
AT&T	23.1	MCI Communications	48.4
Digital Equipment	35.4	Compaq Computer	57.3
Bristol Myers	20.3	Genentech	54.1
Exxon	17.7	Mesa Petroleum	50.9
General Mills	20.4	Holly Sugar	40.8

Source: Merrill Lynch, Pierce, Fenner & Smith, Inc., "Security Risk Evaluation," October 1986.

are substantially more variable than the market portfolio and only a handful are less variable.

This raises an important question: "The market portfolio is made up of individual stocks, so why doesn't its variability reflect the average variability of its components?" The answer is that *diversification reduces variability*.

Even a little diversification can provide a substantial reduction in variability. Suppose you form portfolios of differing size from a sample of stocks and then calculate the standard deviation of returns from each of these portfolios. You can see from Figure 7-3 that diversification can almost halve the variability of returns. But you can get most of this benefit with relatively few stocks: The improvement is slight when the number of securities is increased beyond, say, 15.

Diversification works because prices of different stocks do not move exactly together. Statisticians make the same point when they say that stock price changes are imperfectly correlated. Look, for example, at Figure 7-4. You can see that an investment in either Bristol Myers or Holly Sugar would have been very variable. But there were many occasions on which a decline in the value of one stock was canceled out by a rise in the price of the other.<sup>10</sup> Therefore there was an opportunity to reduce your risk by diversification. Figure 7-4 shows that if you had divided your funds evenly between the two stocks, the variability of your portfolio would have been substantially less than the average variability of the two stocks.

The risk that can potentially be eliminated by diversification is called *unique risk*.<sup>12</sup> Unique risk stems from the fact that many of the perils that surround an individual company are peculiar to that company and perhaps its immediate competitors. But there is also some risk that you can't avoid however much you diversify. This risk is generally known as *market risk*.<sup>13</sup> Market risk stems from the fact that there are other economy-wide perils which threaten all businesses. That is why stocks have a tendency to "move together." And that is why investors are exposed to "market uncertainties" no matter how many stocks they hold.

In Figure 7-5 we have divided the risk into its two parts—unique risk and market risk. If you only have a single stock, unique risk is very important, but once you have a portfolio of 10 or more stocks, diversification has done the bulk

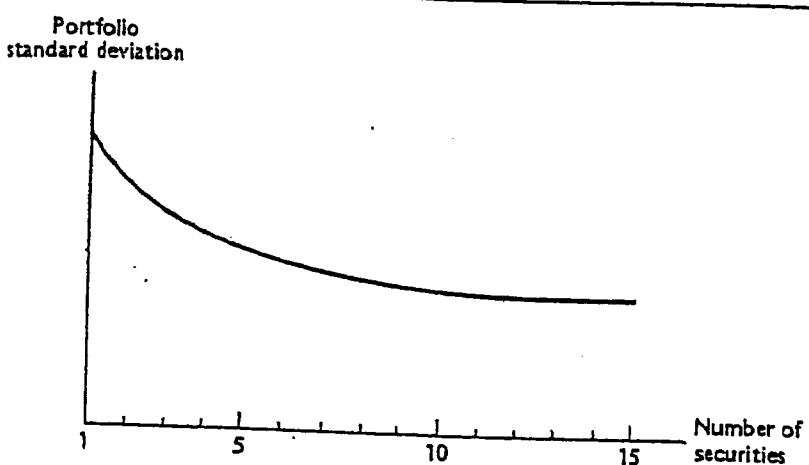
<sup>10</sup> The two stocks' returns were essentially uncorrelated over this period.

<sup>11</sup> For the 3 years from 1983 to 1985, the standard deviations of Bristol Myers and Holly Sugar were 20.6 and 38.8 percent, respectively. The standard deviation of a portfolio half invested in each was about 22 percent.

<sup>12</sup> Unique risk is often called *unsystematic risk*, *residual risk*, *specific risk*, or *diversifiable risk*.

<sup>13</sup> Market risk is often called *systematic risk* or *undiversifiable risk*.

**FIGURE 7-3**  
Diversification reduces risk (standard deviation) rapidly at first, then more slowly.

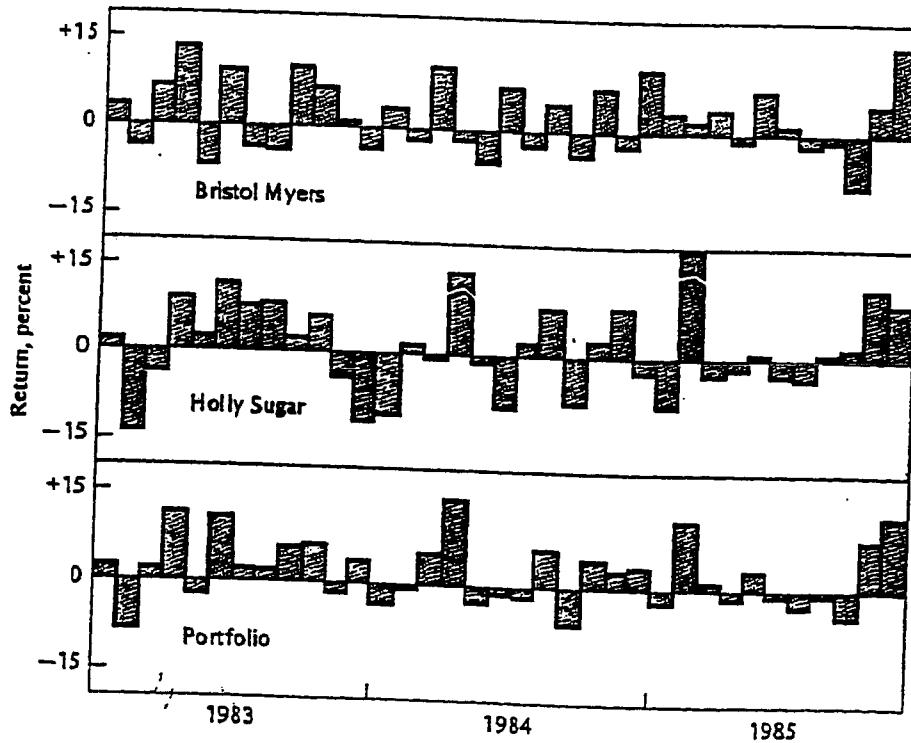


of its work. For a reasonably well-diversified portfolio, only market risk matters. Therefore, the predominant source of uncertainty for a diversified investor is that the market will rise or plummet, carrying the investor's portfolio with it.

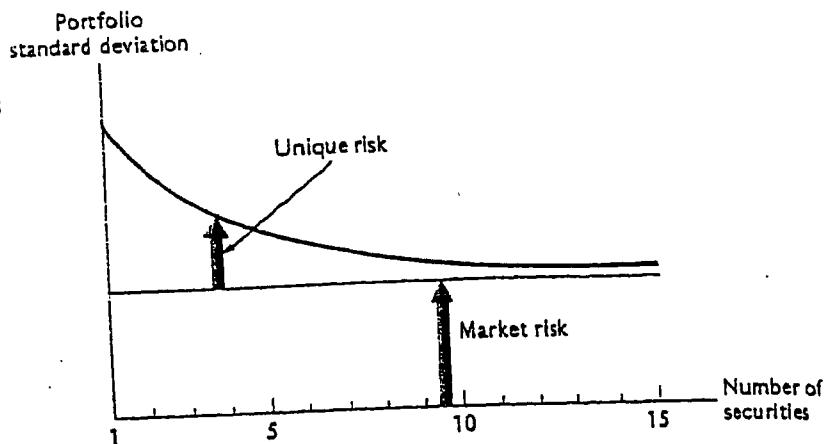
### 7-3 HOW INDIVIDUAL SECURITIES AFFECT PORTFOLIO RISK

In the last section we presented some data on the variability of 10 individual securities. Compaq Computer had the highest standard deviation and Exxon the

**FIGURE 7-4**  
The variability of a portfolio with equal holdings in Bristol Myers and Holly Sugar would have been less than the average variability of the individual stocks.



**FIGURE 7-5**  
Diversification eliminates unique risk. But there is some risk that diversification *cannot* eliminate. This is called *market risk*.



lowest. If you had held Compaq Computer on its own, the spread of possible returns would have been three times greater than if you had held Exxon on its own. But that is not a very interesting fact. Wise investors don't put all their eggs into just one basket: They reduce their risk by diversification. They are therefore interested in the effect that each stock will have on the risk of their portfolio. This brings us to one of the principal themes of this chapter: **The risk of a well-diversified portfolio depends on the market risk of the securities included in the portfolio.** Tattoo that statement on your forehead if you can't remember it any other way. It is one of the most important ideas in this book.

#### Market Risk Is Measured by Beta

If you want to know the contribution of an individual security to the risk of a well-diversified portfolio, it is no good thinking about how risky that security is if held in isolation—you need to measure its *market risk*, and that boils down to measuring how sensitive it is to market movements. This sensitivity of an investment's return to market movements is usually called its *beta* ( $\beta$ ).

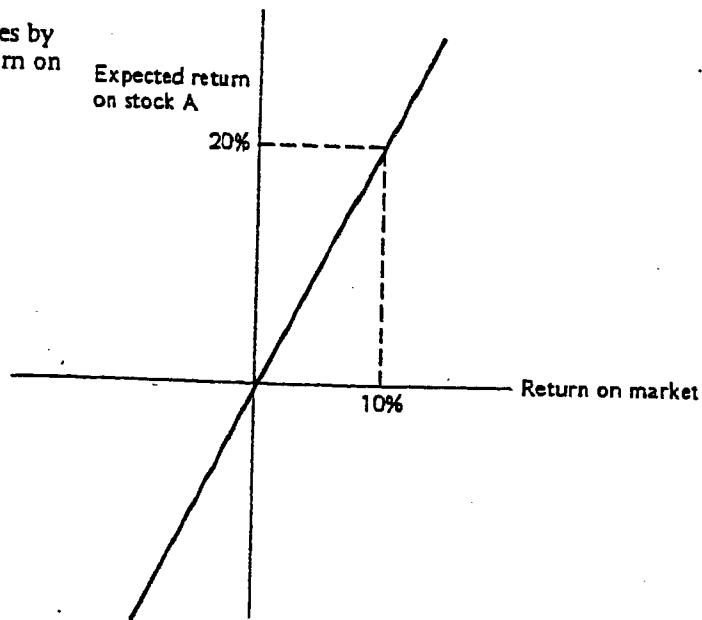
The steeply sloping line in Figure 7-6a shows how the outlook for stock A is affected by market movements. Each extra 1 percent rise in the market results in a further 2 percent rise in the price of stock A. Thus A has a beta of 2.0.

The gently sloping line in Figure 7-6b shows that the return on stock B is not so sensitive to the market. Each extra 1 percent rise in the market produces only an extra .5 percent rise in the price of B. Thus B has a beta of .5.<sup>14</sup>

A diversified portfolio of high-beta stocks is more risky than a diversified portfolio of low-beta stocks. For example, Figure 7-7 shows the performance of two mutual funds—the Keystone S-1 Fund and the Keystone S-4 Fund. Both funds were well-diversified and therefore had little unique risk. Yet the S-4 Fund was about twice as variable as the S-1 Fund. The reason is that the stocks in the S-4 Fund were very sensitive to market changes: They had on average a beta of 1.4. The standard deviation of a well-diversified portfolio of stocks with a beta of 1.4 would be 1.4 times that of the market portfolio. The stocks in the S-1 Fund were less affected by market movements—they had on average a beta of .8. The standard

<sup>14</sup> Beta is measured by the slope of the lines in Figure 7-6a and b. For simplicity, we have drawn the lines so that they pass through the intercept; i.e., both stocks are expected to give a zero return when the market gives a zero return. This is not generally true, as we will explain in Chapter 8.

**FIGURE 7-6a**  
 The expected return on stock A changes by 2 percent for each extra 1 percent return on the market. Its beta is therefore 2.0.

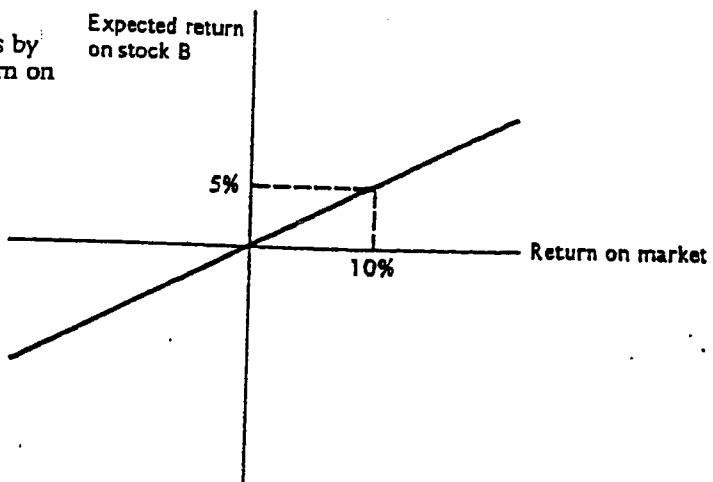


deviation of a well-diversified portfolio of stocks with a beta of .8 is .8 times the standard deviation of the market portfolio.<sup>15</sup> Of course on average stocks have a beta of 1.0. A well-diversified portfolio of such stocks would therefore have the same standard deviation as the market portfolio.

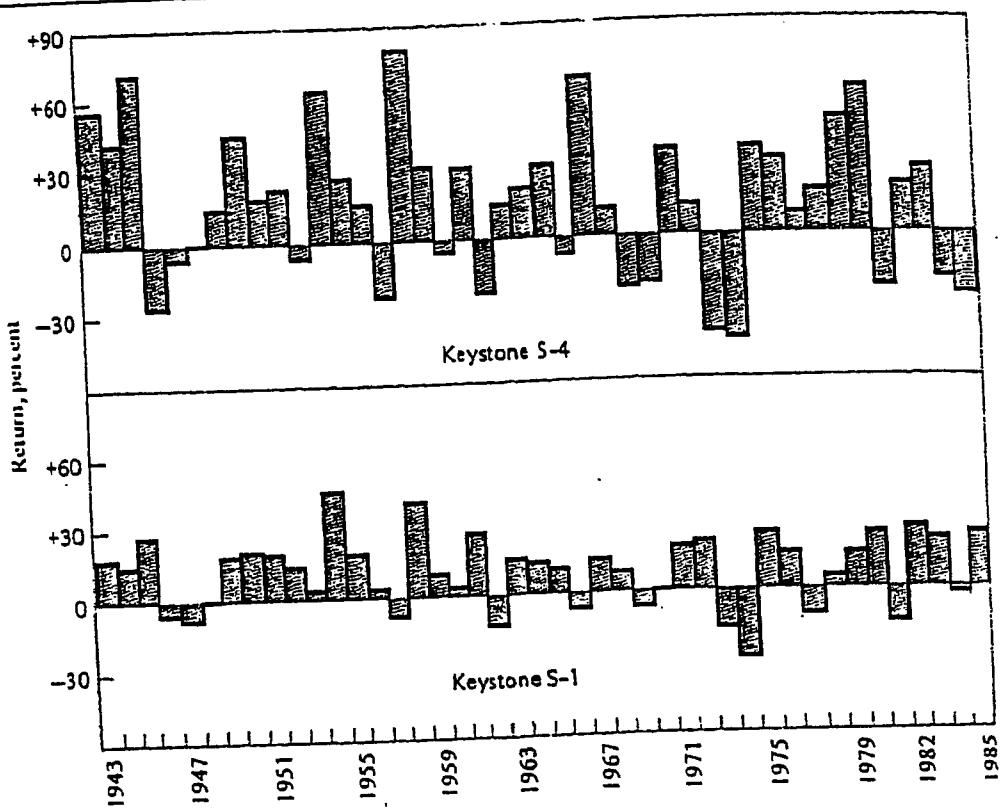
We repeat the general point: *The risk of a well-diversified portfolio depends on the*

<sup>15</sup> This statement is exactly true if the "well-diversified" portfolio is perfectly correlated with the market—that is, if the correlation coefficient between the portfolio and the market returns is +1.0. The statement is only approximately true for the Keystone funds because their returns were not perfectly correlated with the market. The correlation coefficients were .82 and .90 for the S-1 and S-4 funds, respectively.

**FIGURE 7-6b**  
 The expected return on stock B changes by .5 percent for each extra 1 percent return on the market. Its beta is therefore .5.



**FIGURE 7-7**  
 These two mutual funds are both well-diversified, but the S-4 Fund is about twice as variable as S-1. This is because it is more sensitive to market movements.



average beta of the securities included in the portfolio. Thus a security's contribution to portfolio risk depends on the security's beta.

The practical problems of estimating and using betas are taken up in Chapter 9. However, you may find it interesting to look at Table 7-4, which shows how past market movements have affected the 10 stocks that we discussed earlier. General Mills had the lowest beta: Its stock price was about half as sensitive as the average stock to market movements. Genentech was at the other extreme: Its price was almost twice as sensitive as the average stock to market movements.

#### 7-4 RELATIONSHIP BETWEEN RISK AND RETURN

At the beginning of this chapter, we looked at the returns on selected investments. The least risky investment was U.S. Treasury bills. Since the return on Treasury bills is fixed, it is unaffected by what happens to the market. Thus the beta of Treasury bills is zero. The *most* risky investment that we considered was the market portfolio of common stocks. This has average market risk: Its beta is 1.0.

Wise investors don't run risks just for fun. They are playing with real money. Therefore they require a higher return from the market portfolio than from Treasury bills. The difference between the return on the market and the interest rate is termed the *market risk premium*. Over the past 60 years the average market risk premium ( $r_m - r_f$ ) has been 8.4 percent per year.

In Figure 7-8 we have plotted the risk and expected return from Treasury bills and the market portfolio. You can see that Treasury bills have a beta of zero and

TABLE 7-4  
Betas for selected common stocks, 1981-1986

Stock	Beta	Stock	Beta
AT&T	.81	MCI Communications	1.52
Digital Equipment	1.21	Compaq Computer	1.73
Bristol Myers	.91	Genentech	1.95
Exxon	.71	Mesa Petroleum	.68
General Mills	.57	Holly Sugar	.62

Source: Merrill Lynch, Pierce, Fenner & Smith, Inc., "Security Risk Evaluation," October 1986.

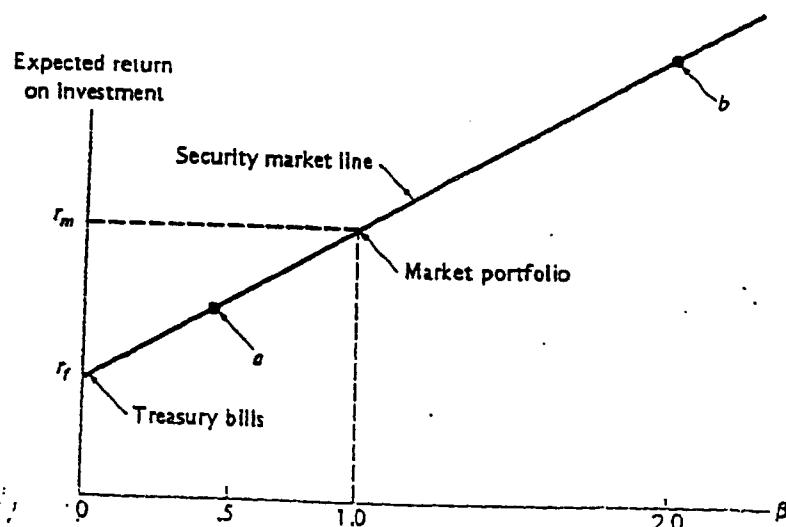
a risk premium of zero.<sup>16</sup> The market portfolio has a beta of 1.0 and an expected risk premium of  $r_m - r_f$ . This gives us two benchmarks for the expected risk premium. But what is the expected risk premium when beta is not zero or one?

In the mid-1960s three economists—Jack Treynor, William Sharpe, and John Lintner—produced an answer to this question.<sup>17</sup> Their answer is known as the *capital asset pricing model*. The model's message is both startling and simple. In a competitive market, the expected risk premium varies in direct proportion to beta. This means that in Figure 7-8, all investments must plot along the sloping line, known as the *security market line*. The expected risk premium on an investment with a beta of .5 is, therefore, *half* the expected risk premium on the market; and the expected risk premium on an investment with a beta of 2.0 is *twice* the expected risk premium on the market. We can write this relationship as:

<sup>16</sup> The return on Treasury bills is fixed regardless of how much the market rises or falls. Therefore, the bills have a beta of zero. Remember also that the risk premium is the difference between the investment's expected return and the risk-free rate. For Treasury bills, the difference is zero.

<sup>17</sup> See W. F. Sharpe, "Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk," *Journal of Finance* 19: 425-442 (September 1964); J. Lintner, "The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets," *Review of Economics and Statistics* 47: 13-37 (February 1965); Treynor's article has not been published.

FIGURE 7-8  
The capital asset pricing model states that the expected risk premium on each investment is proportional to its beta. This means that each investment should lie on the sloping security market line connecting Treasury bills and the market portfolio.



Expected risk premium on stock = beta  $\times$  expected risk premium on market

$$r - r_f = \beta(r_m - r_f)$$

We have given you a bald statement of the capital asset pricing model. We will now give you a glimpse of where that formula came from and how it can be used to estimate the cost of capital. Then in the next two chapters we will examine both topics in more detail.

One investment strategy is to (1) decide what proportion of your money you are prepared to put at risk, and then (2) invest this sum in the market portfolio. If you have any money left over, you can *lend* it at a fixed rate of interest; if you don't have enough money, you can *borrow* the balance at a fixed rate of interest.

For example, suppose that you invest 50 percent of your money in the market portfolio and lend the balance. Then the beta of your investment would be midway between the beta of the market ( $\beta_m = 1.0$ ) and the beta of the loan ( $\beta_f = .0$ ):

$$\begin{aligned} \text{Beta of investment} &= \left( \text{proportion in market} \times \text{beta of market} \right) + \left( \text{proportion in loan} \times \text{beta of loan} \right) \\ \beta &= (.5 \times 1.0) + (.5 \times 0) \\ &= .5 \end{aligned}$$

The expected risk premium on your investment would also be midway between the expected risk premium on the market ( $r_m - r_f$ ) and the expected risk premium on the loan (zero):

$$\begin{aligned} \text{Expected risk premium on investment} &= \left( \text{proportion in market} \times \text{expected risk premium on market} \right) \\ &\quad + \left( \text{proportion in loan} \times \text{expected risk premium on loan} \right) \\ r - r_f &= (.5 \times (r_m - r_f)) + (.5 \times 0) \\ &= .5(r_m - r_f) \end{aligned}$$

In Figure 7-8, we have marked this investment strategy with the letter *a*.

If you are more audacious, you might choose to invest all your own money and an equal amount of borrowed money in the market portfolio. In this case, the beta of your investment would be twice the beta of the market.<sup>18</sup>

$$\begin{aligned} \text{Beta of investment} &= \left( \text{proportion in market} \times \text{beta of market} \right) + \left( \text{proportion in loan} \times \text{beta of loan} \right) \\ \beta &= (2.0 \times 1.0) + (-1.0 \times 0) \\ &= 2.0 \end{aligned}$$

<sup>18</sup> Notice that the "proportion in loan" is negative. Borrowing money is equivalent to lending a negative amount.

The expected risk premium on your investment would also be twice the expected risk premium on the market:

$$\begin{aligned} \text{Expected risk premium} &= \left( \begin{array}{c} \text{proportion} \\ \text{in} \\ \text{market} \end{array} \times \begin{array}{c} \text{expected} \\ \text{risk} \\ \text{premium} \end{array} \right) \\ &+ \left( \begin{array}{c} \text{proportion} \\ \text{in loan} \end{array} \times \begin{array}{c} \text{expected} \\ \text{risk} \\ \text{premium} \end{array} \right) \\ & \text{on market} \\ & \text{on loan} \end{aligned}$$

$$\begin{aligned} r - r_f &= [2.0 \times (r_m - r_f)] + (-1.0 \times 0) \\ &= 2.0(r_m - r_f) \end{aligned}$$

In Figure 7-8, we have marked this investment strategy with the letter *b*.

These two examples illustrate that you can obtain *any* position along the security market line simply by investing a proportion of your money in the market portfolio and borrowing or lending the balance. The portfolios along the line set a standard for your other investments: You will be willing to hold them only if they offer equally good prospects.<sup>19</sup> Thus the required risk premium for any investment is given by the security market line:

$$r - r_f = \beta(r_m - r_f)$$

Using the  
Capital Asset  
Pricing Model  
to Calculate  
Expected  
Returns

In Chapter 4, we explained that the price of a common stock is equal to the discounted value of the expected dividend and end-of-period price:

$$P_0 = \frac{\text{DIV}_1 + P_1}{1 + r}$$

We defined the discount rate *r* as the expected return offered by other equally risky stocks. The capital asset pricing model allows us to be more specific about this discount rate.

In order to figure out the returns that investors are expecting from particular stocks, we need three numbers —  $r_f$ ,  $(r_m - r_f)$ , and  $\beta$ . In April 1987, the interest rate on Treasury bills ( $r_f$ ) was 5.6 percent. From past evidence, we would judge that  $r_m - r_f$  is about 8.4 percent. Finally, in Table 7-4, we gave you estimates of the betas of 10 stocks. Table 7-5 puts these numbers together to give an estimate of the expected return from each stock. Let's take Exxon as an example:

$$\begin{aligned} \text{Expected rate of return} &= r = r_f + \beta(r_m - r_f) \\ &= .056 + .71(.084) \\ &= .116, \text{ or } 11.6 \text{ percent} \end{aligned}$$

You can also use the capital asset pricing model to find the discount rate for a new capital investment. For example, suppose that you are analyzing a proposal

<sup>19</sup> Suppose you could find a stock with a negative beta. Its expected risk premium would be negative; i.e., it would offer a *lower* expected return than Treasury bills. There is a good reason for this. A stock with a negative beta would be very desirable. If you invested in both the stock and the market portfolio in the proper proportions, you could reduce risk dramatically.

TABLE 7-5

These estimates of the returns *expected* by investors in early 1987 were based on the capital asset pricing model. We assumed that the interest rate  $r_f = 5.6$  percent and the expected market risk premium  $r_m - r_f = 8.4$  percent

Stock	Beta ( $\beta$ )	Expected Return $r_f + \beta(r_m - r_f)$
AT&T	.81	12.4
Digital Equipment	1.21	15.8
Bristol Myers	.91	13.2
Exxon	.71	11.6
General Mills	.57	10.4
MCI Communications	1.52	18.4
Compaq Computer	1.73	20.1
Genentech	1.95	22.0
Mesa Petroleum	.68	11.3
Holly Sugar	.62	10.8

by Digital Equipment Corporation to expand its capacity. At what rate should you discount the forecasted cash flows? According to Table 7-5 investors are looking for a return of 15.8 percent from businesses with the risk of Digital Equipment. So the cost of capital for a further investment in the same business is 15.8 percent.<sup>20</sup>

In practice, choosing a discount rate is seldom so easy. (After all, you can't expect to be paid a fat salary just for plugging numbers into a formula.) For example, you must learn how to adjust for the extra risk caused by company borrowing and how to estimate the discount rate for projects that do not have the same risk as the company's existing business. There are also tax issues. But these refinements can wait until later.<sup>21</sup>

### 7-5 DIVERSIFICATION AND VALUE ADDITIVITY

We have seen that diversification reduces risk and, therefore, makes sense for individual investors. But does it also make sense for the firm? Is a diversified firm more attractive to investors than an undiversified one? If it is, we have an *extremely* disturbing result. If diversification is an appropriate corporate objective, the financial manager faces a problem of horrendous complexity, for each project would need to be analyzed as a potential addition to the firm's portfolio of projects. The value of the diversified package would be greater than the sum of the parts. Present values would no longer add.

Diversification is undoubtedly a good thing, but that does not mean that firms

<sup>20</sup> Remember that instead of investing in plant and machinery, the firm could return the money to the shareholder. The opportunity cost of investing is the return that shareholders could expect to earn by buying financial assets. This expected return depends on the market risk of the assets, not on their unique risk.

<sup>21</sup> Tax issues arise because a corporation must pay tax on income from an investment in Treasury bills or other interest-paying securities. It turns out that the correct discount rate for risk-free investments is the *after-tax* Treasury rate. We come back to this point in Chapters 19 and 26.

Various other points on the practical use of betas and the capital asset pricing model are covered in Chapter 9.

should practice it. If investors were *not* able to hold a large number of securities, then they might want firms to diversify for them. But investors *can* diversify.<sup>22</sup> In many ways they can do so more easily than firms. Individuals can invest in the steel industry this week and pull out the next week. A firm cannot do that. To be sure, the individual would have to pay brokerage fees on the purchase and sale of steel company shares, but think of the time and expense for a firm to acquire a steel company or to start up a new steel-making operation.

You can probably see where we are heading. If investors can diversify on their own account, they will not pay any *extra* for firms that diversify. And if they have a sufficiently wide choice of securities, they will not pay any *less* because they are unable to invest separately in each factory. Therefore, in countries like the United States, which have large and competitive capital markets, diversification does not add to a firm's value or subtract from it. The total value is the sum of its parts.

This conclusion is important for corporate finance, because it justifies adding present values. The concept of value additivity is so important that we will give a formal definition of it. If the capital market establishes a value  $PV(A)$  for asset A and  $PV(B)$  for B, the market value of a firm that holds only these two assets is:

$$PV(AB) = PV(A) + PV(B)$$

A three-asset firm combining assets A, B, and C would be worth  $PV(ABC) = PV(A) + PV(B) + PV(C)$ , and so on for any number of assets.

We have relied on intuitive arguments for value additivity. But the concept is a general one that can be proved formally by several different routes.<sup>23</sup> The concept of value additivity seems to be widely accepted, for thousands of managers add thousands of present values daily, usually without thinking about it.

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\*Value Additivity and the Capital Asset Pricing Model—An Example

The capital asset pricing model states that investors do not demand extra expected return just to cover a firm's *unique* risk. The only risk that investors care about is the risk that they *cannot* diversify away—that is, the *market* risk. But the firm can't diversify away market risk. Therefore, diversification by the firm has no impact on the opportunity cost of capital.

Here's an example which illustrates how value additivity works in the context of betas and the capital asset pricing model. Suppose we have two projects, A and B. Each offers \$100 cash flow at year 1, and zero cash flow in all subsequent years. The beta for project A is  $\beta_A = 1.0$ . The beta for project B is  $\beta_B = 2.0$ . We will assume a risk-free rate of  $r_f = 10$  percent and a market risk premium of  $r_m - r_f = 8$  percent. The capital asset pricing model gives the following opportunity costs of capital for the two projects:

$$r = r_f + \beta(r_m - r_f)$$

$$r_A = .10 + 1.0(.08) = .18$$

$$r_B = .10 + 2.0(.08) = .26$$

<sup>22</sup> One of the simplest ways for an individual to diversify is to buy shares in a mutual fund which holds a diversified portfolio.

<sup>23</sup> You may wish to refer to the appendix to Chapter 33, which discusses diversification and value additivity in the context of mergers.

The present values of the two projects are therefore:

$$PV_A = \frac{100}{1 + r_A} = \frac{100}{1.18} = 84.75$$

$$PV_B = \frac{100}{1 + r_B} = \frac{100}{1.26} = 79.37$$

We can also consider a project AB formed by combining A and B. Here is what we know so far:

Project	Cash Flow	Beta	Opportunity Cost of Capital	Present Value
A	100	1.0	.18	84.75
B	100	2.0	.26	79.37
AB	200	?	?	?

Value additivity tells us that  $PV(AB) = PV(A) + PV(B)$ . That implies

$$PV(AB) = 84.75 + 79.37 = 164.12$$

We'll now show that the capital asset pricing model gives exactly that answer.

First, calculate the beta of project AB. It's a weighted average of  $\beta_A$  and  $\beta_B$ , with weights determined by the present values of the two projects.<sup>24</sup>

$$\begin{aligned} \beta_{AB} &= \beta_A \frac{PV(A)}{PV(AB)} + \beta_B \frac{PV(B)}{PV(AB)} \\ &= 1.0 \frac{84.75}{164.12} + 2.0 \frac{79.37}{164.12} \\ &= 1.484 \end{aligned}$$

Calculate the opportunity cost of capital for AB.

$$\begin{aligned} r_{AB} &= r_f + \beta_{AB}(r_m - r_f) \\ &= .10 + 1.484(.08) \\ &= .2187 \end{aligned}$$

Calculate the present value of AB:

$$PV_{AB} = \frac{200}{1 + r_{AB}} = \frac{200}{1.2187} = 164.12$$

Thus everything works out. If we had started with beta (1.484) for a project AB, without knowing the present values of A and B as separate assets, we would have valued AB correctly.

Of course, in practice, you aren't handed any of the betas. You have to estimate them. We will discuss how betas are estimated in Chapter 9.

<sup>24</sup> This numerical example uses a beta calculated to three decimal places and an opportunity cost of capital calculated to four places. We do this so that rounding errors do not fog over the example's conceptual point. In real life, you will be lucky to pin down betas and costs of capital to two decimal places.

## -6 SUMMARY

Our review of capital market history showed that the returns received by investors have varied according to the risks they have borne. At one extreme, very safe securities like U.S. Treasury bills have provided an average return over half a century of only 3.5 percent a year. The riskiest securities that we looked at were common stocks. They have provided an average return of 12.0 percent, a premium of more than 8 percent over the safe rate of interest.

This gives us two benchmarks for the opportunity cost of capital. If we are evaluating a safe project, we discount at the current risk-free rate of interest. If we are evaluating a project of average risk, we discount at the expected return on the average common stock, which historical evidence suggests is between 8 and 9 percent above the risk-free rate. That still leaves us with a lot of assets that don't fit these simple cases. Before we can deal with them, we need to learn how to measure risk.

Risk is best judged in a portfolio context. Most investors do not put all their eggs in one basket: They diversify. Thus the effective risk of any security cannot be judged by an examination of that security alone. Part of the uncertainty about the security's return is diversified away when the security is grouped with others in a portfolio.

Risk in investment means that future returns are unpredictable. This spread of possible outcomes is usually measured by standard deviation. The standard deviation of the *market portfolio*—generally represented by the Standard and Poor's Composite Index—is around 20 percent a year.

Most individual stocks have higher standard deviations than this, but much of their variability represents *unique* risk that can be eliminated through diversification. Diversification cannot eliminate *market* risk. Diversified portfolios are exposed to variations in the general level of the market.

A security's contribution to the risk of a well-diversified portfolio depends on the security's reaction to a general market decline. This sensitivity to market movements is known as *beta* ( $\beta$ ). Beta measures the amount that investors expect the stock price to change for each additional 1 percent change in the market. The average beta of all stocks is 1.0. A stock with a beta greater than 1 is unusually sensitive to market movements. A stock with a beta below 1 is unusually insensitive to market movements. The standard deviation of a well-diversified portfolio is proportional to its beta. Thus a diversified portfolio invested in stocks with a beta of 2.0 will have twice the risk of a diversified portfolio invested in stocks with a beta of 1.0.

We looked at the relationship between risk and return in a well-functioning capital market, and presented a model of risk and return known as the *capital asset pricing model*. Its message is simple: If investors can invest some fraction of their money in the market portfolio and borrow or lend the balance, they can obtain any point on the security market line, as shown in Figure 7-8. In that case, an investor should be willing to hold a security with a particular beta only if it offers an equally good return. Therefore, all securities should plot along this line. Another way to say the same thing is that the expected risk premium should increase in proportion to the security's beta:

$$\text{Expected risk premium} = \beta \times (\text{expected market risk premium})$$

$$r - r_f = \beta(r_m - r_f)$$

**3.4 *Partnership Profiles, “2007 Rate of Return Study,  
Publicly-Held Real Estate Limited Partnerships and Real  
Estate Investment Trusts***

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# **2007 RATE OF RETURN STUDY**

## **Publicly-Held Real Estate Limited Partnerships and Real Estate Investment Trusts**

**Partnership Profiles, Inc.**

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### **OVERVIEW**

The price or value at which a public or privately held interest will trade is primarily dependent on the expected rate of return of the interest. An underlying premise in valuation is that an investor will require a rate of return on an investment equivalent to the rate of return on alternative investments with an equivalent amount of risk. Given two investment choices with equal risk, an investor will choose the investment with the greater expected rate of return.

Included herein is a discussion of rates of return on various publicly-held investments including government bonds, real estate investment trusts (REITs) and syndicated real estate limited partnerships. The data presented in this report is particularly beneficial to valuation professionals when determining the value of a privately held interest, including family limited partnerships and limited liability companies. By gaining insight into the rate of return expectations of interests with similar attributes or levels of risk, a valuation professional can make reasonable comparisons and derive value estimates based upon comparable rate of return expectations.

When making an investment, one of the primary issues an investor considers is the expected rate of return of the investment by comparing the investment to alternative investments with an equivalent amount of risk. As the perceived risk of an investment increases, a higher rate of return will be required. Alternatively, the amount an investor is willing to pay for an investment is dependent on the perceived rate of return the investment will yield. This is most clearly illustrated in the bond market where the value of a bond is inversely related to market interest rates. As interest rates increase, the amount an investor is willing to pay for a fixed rate bond decreases in order to increase the effective yield on the bond to a level commensurate with market rates. As an example, if a bond has a stated coupon rate of 5% and the market rate of interest increases to 7%, an investor would pay less for the bond in order to increase the effective yield of the bond to the prevailing market rate.

## **REAL ESTATE INVESTMENTS TRUSTS**

REITs provide useful information that can provide assistance when calculating the real estate risk premium for the calculation of a discount rate.<sup>1</sup> According to the National Association of Real Estate Investment Trusts (NAREIT), a REIT is a company that owns, finances and/or operates income producing real estate. REITs were created in 1960 by the U.S. Congress to provide a financial instrument for investors so that they could participate in the development and ownership of large-scale commercial real estate properties.

There are basically three types of REITs – Equity REITs, Mortgage REITs and Hybrid REITs. Equity REITs own and operate income producing real estate. Mortgage REITs lend money to real estate owners and developers to finance real estate projects. They may also indirectly lend money for real estate through the acquisition of loans or mortgage backed securities. Hybrid REITs own both real estate properties and real estate mortgages.

Information calculated by NAREIT is useful for measuring the rate of return for Equity REITs. Generally, using the return data over a long period of time provides insight into the average real estate risk premium required as compared to risk free investments over the same time period. Rate of return information obtained from NAREIT going back to 1972 reflects an average annual return over the past 35 years of 15.2%.

The computation of the average return over the past 20, 25 and 30 year periods is shown below.

Average Return - last 20 years	14.3%
Average Return - last 25 years	15.9%
Average Return - last 30 years	16.5%

The average annual returns for Equity REITs are shown below.

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<sup>1</sup> Bruce A. Johnson, James R. Park and Spencer Jefferies, Comprehensive Guide for the Valuation of Family Limited Partnerships – 3rd Edition, (Dallas, Texas: Partnership Profiles, Inc. 2006), 16-17.

Equity REIT		Return Since 1972	Equity REIT		Return Since 1972
Year	Return		Year	Return	
1972	8.0%	8.0%	1989	8.8%	14.8%
1973	-15.5%	-3.8%	1990	-15.4%	13.2%
1974	-21.4%	-9.6%	1991	35.7%	14.4%
1975	19.3%	-2.4%	1992	14.6%	14.4%
1976	47.6%	7.6%	1993	19.7%	14.6%
1977	22.4%	10.1%	1994	3.2%	14.1%
1978	10.3%	10.1%	1995	15.3%	14.2%
1979	35.9%	13.3%	1996	35.3%	15.0%
1980	24.4%	14.6%	1997	20.3%	15.2%
1981	6.0%	13.7%	1998	-17.5%	14.0%
1982	21.6%	14.4%	1999	-4.6%	13.3%
1983	30.6%	15.8%	2000	26.4%	13.8%
1984	20.9%	16.2%	2001	13.9%	13.8%
1985	19.1%	16.4%	2002	3.8%	13.5%
1986	19.2%	16.6%	2003	37.1%	14.2%
1987	-3.6%	15.3%	2004	31.6%	14.7%
1988	13.5%	15.2%	2005	12.2%	14.7%
			2006	35.1%	15.2%

### CALCULATON OF REAL ESTATE RISK PREMIUM

Historical rates on long term government bonds can be used in conjunction with the historical REIT rate of return information or publicly held real estate limited partnerships to derive a real estate risk premium. The real estate risk premium is used as a component in the calculation of a discount rate.<sup>2</sup>

A well respected text, Ibbotson Associates' Stocks Bonds, Bills and Inflation, recommends the use of the 20 year Treasury bond for measuring the long term risk free rate.<sup>3</sup> The historical income return on long term government bonds can be used as a proxy for a risk free rate of return.

Use of the historical rates of return on long term government bonds should correspond to the same period as obtained from the REITs. For example, if the 35 year average return for REITs is selected to determine the Real Estate Risk Premium, the 35 year average income return for government bonds should also be used for the calculation.

The historical income returns for long term government bonds (20 year) are shown on the following page from 1972 to 2006. The average income return is calculated by averaging the monthly long term government bond income returns

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<sup>2</sup> Johnson, 65-66.

<sup>3</sup> Ibbotson Associates, Stocks, Bonds, Bills and Inflation Valuation Edition 2006 Yearbook, (Chicago, Ill: Ibbotson Associates, Inc. 2006), 59.

as published in Stocks, Bonds, Bills and Inflation Valuation Edition 2006 Yearbook.<sup>4</sup> For the most recent calendar year, the average yield for long term bonds was used. Over the past 35 years, the average income return for long term government bonds was estimated to be 7.7%.<sup>5</sup>

The average income return on long term government bonds for the last 20, 25 and 30 year periods is shown below.

Average Income Return - last 20 years	6.6%
Average Income Return - last 25 years	7.5%
Average Income Return - last 30 years	7.8%

The annual rate of return for REITs and the annual income return for the 20 year Treasury bond is shown as follows.

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<sup>4</sup> Ibid, 240-241.

<sup>5</sup> As of the release of this report, the long term government bond income return for 2006 has not been published. For calculation purposes, the income return for 2006 was estimated to be 5.0% using the Federal Reserve weekly yields for the 20 year Treasury bond.

Year	Equity REIT Return	Return Since 1972	LT Govt Bond Income Return	Return Since 1972
1972	8.0%	8.0%	5.9%	5.9%
1973	-15.5%	-3.8%	6.5%	6.2%
1974	-21.4%	-9.6%	7.3%	6.6%
1975	19.3%	-2.4%	8.0%	6.9%
1976	47.6%	7.6%	7.9%	7.1%
1977	22.4%	10.1%	7.1%	7.1%
1978	10.3%	10.1%	7.9%	7.2%
1979	35.9%	13.3%	8.9%	7.4%
1980	24.4%	14.6%	10.0%	7.7%
1981	6.0%	13.7%	11.6%	8.1%
1982	21.6%	14.4%	13.5%	8.6%
1983	30.6%	15.8%	10.4%	8.7%
1984	20.9%	16.2%	11.7%	9.0%
1985	19.1%	16.4%	11.3%	9.1%
1986	19.2%	16.6%	9.0%	9.1%
1987	-3.6%	15.3%	7.9%	9.0%
1988	13.5%	15.2%	9.0%	9.0%
1989	8.8%	14.8%	8.8%	9.0%
1990	-15.4%	13.2%	8.2%	9.0%
1991	35.7%	14.4%	8.2%	8.9%
1992	14.6%	14.4%	7.3%	8.9%
1993	19.7%	14.6%	7.2%	8.8%
1994	3.2%	14.1%	6.6%	8.7%
1995	15.3%	14.2%	7.6%	8.6%
1996	35.3%	15.0%	6.2%	8.5%
1997	20.3%	15.2%	6.6%	8.5%
1998	-17.5%	14.0%	5.8%	8.4%
1999	-4.6%	13.3%	5.6%	8.3%
2000	26.4%	13.8%	6.5%	8.2%
2001	13.9%	13.8%	5.5%	8.1%
2002	3.8%	13.5%	5.6%	8.0%
2003	37.1%	14.2%	4.8%	7.9%
2004	31.6%	14.7%	5.0%	7.9%
2005	12.2%	14.7%	4.6%	7.8%
2006	35.1%	15.2%	5.0%	7.7%

Deducting the long-term government bond income return from the long-term historical REIT total return over a comparative time period results in an estimated real estate risk premium. It is important to ensure that comparative time periods are used in the calculation and that the time period used is a sufficiently long period of time to eliminate the impact of short term volatility or changes in interest rates. Using the complete history of REIT returns (35 years) resulted in an implied real estate risk premium of 7.6%. This is shown below along in comparison with the last 20, 25 and 30 year periods.

	<u>REIT</u>	<u>Govt Bond</u>	<u>Implied Premium</u>
Average Return - last 20 year	14.3%	- 6.6%	= 7.7%
Average Return - last 25 year	15.9%	- 7.5%	= 8.3%
Average Return - last 30 year	16.5%	- 7.8%	= 8.7%
Average Return - last 34 year	15.2%	- 7.7%	= 7.6%

Similar to the use of REITs, the estimated rate of return expectation of real estate limited partnerships can also be used to calculate a real estate risk premium. In using the real estate limited partnerships, the average return expectation on the real estate limited partnerships over the thirteen year period presented should be compared to the thirteen year average income return of the government bonds for the corresponding time period. A real estate risk premium is calculated below using the average expected rate of return for real estate limited partnerships over the past thirteen years and the thirteen year average long term government bond income return.

	<u>Limited Partnership</u>	<u>Gov't Bond*</u>	<u>Implied Premium</u>
Average Return	20.1%	- 5.8%	= 14.3%

*\* estimated*

It should be noted that the resulting real estate risk premium is higher than the real estate risk premium derived from REITs which is explained below.

Publicly held real estate limited partnerships and REITs provide a unique insight into rate of return expectations in real estate entities. As evidenced, REITs generally have lower rate of return expectations than publicly held limited partnerships. This is generally due to their lower level of risk including:

- greater diversification of properties,
- greater depth in management,
- ownership of investment grade properties,

- the statutory requirement to pay out 90% of taxable income in the form of distributions to minority shareholders.

A portion of the increased return can also be attributed to publicly-held limited partnership's lack of marketability because the limited partnership secondary market has less breadth and depth than the REIT market. For more information, please see the recent study quantifying the amount of the discount for lack of marketability reflected in the prices of publicly held limited partnerships that was published in the 3<sup>rd</sup> Edition of the Comprehensive Guide for the Valuation of Family Limited Partnerships.<sup>6</sup>

It is important to remember that publicly held limited partnerships are marketable and do trade between independent third parties.<sup>7</sup> When using the above data, an adjustment for lack of marketability should be made to the resulting value when appraising a privately held, noncontrolling interest.<sup>8</sup>

## **CONCLUSION**

Information based on the historical returns for REITs and publicly held limited partnerships is useful when valuing family limited partnerships that hold real estate and real estate related investments. An understanding of how the rates of return have been calculated is essential to correctly applying the information.

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<sup>6</sup> Johnson, 33-34.

<sup>7</sup> Ibid, 28-32.

<sup>8</sup> Ibid, 125-147.

## *Appendix 4*

- 4.1    *Windmill Mobile Estates, Income Statements for January – May 2005, Year Ending 2006 and January – June 2007***
- 4.2    *Windmill Mobile Estates, March 2007 Rent Roll***
- 4.3    *County of Santa Clara Notice of Enrollment of Escape Assessment***
- 4.4    *Principles of Corporate Finance", Richard A. Brealy and Stewart C. Myers, McGraw Hill, Chapter 6, pp. 96-98***
- 4.5    *Buyer's/Borrower's Settlement Statement, ICAGO Title Company***

**4.1 *Windmill Mobile Estates, Income Statements for January – May 2005, Year Ending 2006 and January – June 2007.***

**PW Property Investments LLC**  
**Income Statement**  
**For the Six Months Ending June 30, 2007**

	Current Month		Year to Date	
<b>Revenues</b>				
Rental Income	\$ 45,527.66	99.91	\$ 283,939.37	99.96
Laundry Income	29.52	0.06	43.13	0.02
Interest # 007-004713	11.54	0.03	50.67	0.02
Other Income	0.00	0.00	22.57	0.01
<b>Total Revenues</b>	<b>45,568.72</b>	<b>100.00</b>	<b>284,055.74</b>	<b>100.00</b>
 <b>Cost of Sales</b>				
<b>Total Cost of Sales</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Gross Profit</b>	<b>45,568.72</b>	<b>100.00</b>	<b>284,055.74</b>	<b>100.00</b>
 <b>Expenses</b>				
Gardening Expenses	0.00	0.00	3,301.94	1.16
Legal and Professional Fees	4,493.45	9.86	17,386.00	6.12
Workers' Compensation	2,716.68	5.96	3,347.68	1.18
Management Fees	14,202.80	31.17	17,202.80	6.06
Permits and Licenses	0.00	0.00	1,380.00	0.49
Mortgage Interest	16,441.92	36.08	97,764.31	34.42
Mortgage Int-Castle LnTracing	3,276.88	7.19	19,718.70	6.94
Mortg Int-Allegre Tracing	531.19	1.17	11,278.88	3.97
Painting and Decorating	0.00	0.00	1,459.76	0.51
Plumbing and Electrical	0.00	0.00	6,447.00	2.27
Supplies	251.24	0.55	816.27	0.29
Property Taxes	33.02	0.07	33.02	0.01
Telephone Expense	133.51	0.29	798.14	0.28
Utilities	9,825.10	21.56	69,359.87	24.42
Office Expense	167.10	0.37	2,159.73	0.76
Pool Services	100.67	0.22	696.36	0.25
Payroll Tax Expense	141.53	0.31	1,017.15	0.36
Bank Charge	0.00	0.00	54.65	0.02
Wages Expense	1,850.00	4.06	11,100.00	3.91
LLC Tax	0.00	0.00	3,300.00	1.16
<b>Total Expenses</b>	<b>54,165.09</b>	<b>118.86</b>	<b>268,622.26</b>	<b>94.57</b>
<b>Net Income</b>	<b>\$ (8,596.37)</b>	<b>(18.86)</b>	<b>\$ 15,433.48</b>	<b>5.43</b>

For Management Purposes Only

**PW Property Investments LLC**  
**Income Statement**  
**For the Twelve Months Ending December 31, 2006**

	Current Month This Year	Current Month Last Year	Year to Date This Year	Year to Date Last Year
<b>Revenues</b>				
Rental Income	\$ 48,130.13	\$ 34,984.87	\$ 559,241.38	\$ 203,244.13
Laundry Income	14.15	0.00	59.24	0.00
Interest Income	0.00	0.00	0.00	626.67
Interest # 007-004713	0.00	0.00	495.38	0.00
Other Income	822.63	0.00	837.06	0.00
<b>Total Revenues</b>	<b>48,966.91</b>	<b>34,984.87</b>	<b>560,633.06</b>	<b>203,870.80</b>
<b>Cost of Sales</b>				
<b>Total Cost of Sales</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Gross Profit</b>	<b>48,966.91</b>	<b>34,984.87</b>	<b>560,633.06</b>	<b>203,870.80</b>
<b>Expenses</b>				
Amortization Expense	0.00	667.00	0.00	667.00
Depreciation Expenses	0.00	26,455.00	0.00	26,455.00
Auto and Travel Expenses	0.00	833.32	476.94	838.96
Maintenance	214.00	0.00	2,689.00	1,127.50
Roofing - Windmill	0.00	3,326.00	2,200.00	3,326.00
Gardening Expenses	700.00	700.00	11,272.78	1,925.00
Legal and Professional Fees	61.50	(3,838.36)	7,434.25	3,661.64
Insurance	0.00	0.00	6,153.00	9,799.00
Workers' Compensation	0.00	0.00	1,702.51	0.00
Management Fees	200.00	0.00	19,500.00	600.00
Permits and Licenses	996.00	0.00	3,637.00	3,874.01
Mortgage Interest	22,484.87	12,428.51	164,802.18	43,658.89
Mortgage Int-Castle LnTracing	0.00	13,395.13	30,777.69	13,395.13
Mortg Int-Allegre Tracing	516.18	13,132.42	20,250.49	13,132.42
Painting and Decorating	3,999.57	0.00	3,999.57	0.00
Pest Control	0.00	0.00	0.00	950.00
Plumbing and Electrical	0.00	0.00	4,443.15	866.80
Repairs	0.00	0.00	4,777.59	3,050.00
Supplies	88.14	104.81	2,166.52	2,145.02
Appliance	0.00	0.00	0.00	453.41
Property Taxes	0.00	29,795.64	30,995.58	26,949.11
Telephone Expense	206.09	265.20	2,458.66	1,321.13
Utilities	13,930.14	23,689.09	132,088.92	49,326.20
Office Expense	482.74	322.20	3,050.33	2,241.91
Pool Services	515.80	102.98	9,027.01	184.67
Payroll Tax Expense	141.56	162.41	1,677.87	861.88
Penalties and Fines Exp	0.00	0.00	93.72	0.00
Bank Charge	0.00	0.00	310.38	61.90
Wages Expense	1,850.00	1,616.00	19,608.00	8,576.00
LLC Tax	0.00	0.00	1,600.00	0.00
<b>Total Expenses</b>	<b>46,386.59</b>	<b>123,157.35</b>	<b>487,193.14</b>	<b>219,448.58</b>
<b>Net Income</b>	<b>\$ 2,580.32</b>	<b>\$ (88,172.48)</b>	<b>\$ 73,439.92</b>	<b>\$ (15,577.78)</b>

For Management Purposes Only

**Income Statement (Cash)**  
**575 / Windmill Partners - (mwind)**  
**May 2005**

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	Month to Date	%	Year to Date	%
<b>INCOME</b>				
<b>RENT INCOME</b>				
Gross Potential Rent	31,089.40	100.00	154,473.35	100.00
Less: Concessions	0.00	0.00	294.62	0.19
Less: Delinquency	709.98	2.28	709.98	0.46
Less: Mgmt / Emp. Units	294.62	0.95	1,178.48	0.76
Plus: Prepaid Rent	0.00	0.00	40.53	0.03
<b>NET RENT INCOME</b>	<b>30,084.80</b>	<b>96.77</b>	<b>152,330.80</b>	<b>98.61</b>
<b>OTHER OPERATING INCOME</b>				
Trash	1,639.10	5.27	8,364.46	5.41
Sewer	1,456.38	4.68	7,415.82	4.80
Water	833.56	2.68	4,168.96	2.70
Application Fees	60.00	0.19	80.00	0.05
Late & NSF Fees	20.00	0.06	225.00	0.15
Laundry	0.00	0.00	14.76	0.01
R.V. Storage	125.00	0.40	625.00	0.40
<b>TOTAL OTHER OPER. INCOME</b>	<b>4,134.04</b>	<b>13.30</b>	<b>20,894.00</b>	<b>13.53</b>
<b>TOTAL OPERATING INCOME</b>	<b>34,218.84</b>	<b>110.07</b>	<b>173,224.80</b>	<b>112.14</b>
<b>OPERATING EXPENSES</b>				
<b>PAYROLL EXPENSE</b>				
Manager Salaries	2,781.04	8.95	13,155.84	8.52
Payroll Taxes	212.75	0.68	1,709.92	1.11
Workers Comp.	864.90	2.78	4,269.72	2.76
Health Ins.	1,237.74	3.98	5,499.22	3.56
Agtr. Util. / Elec.	125.00	0.40	500.00	0.32
Mgr. Cable	39.99	0.13	199.98	0.13
<b>TOTAL PAYROLL EXPENSE</b>	<b>5,261.42</b>	<b>16.92</b>	<b>25,334.68</b>	<b>16.40</b>
<b>CONTRACT SERVICES</b>				
Answering Service	125.00	0.40	592.50	0.38
Billing Service	234.25	0.75	1,188.00	0.77
Garbage Removal	2,150.40	6.92	10,852.00	7.03
<b>TOTAL CONTRACT SERVICES</b>	<b>2,509.65</b>	<b>8.07</b>	<b>12,632.50</b>	<b>8.18</b>
<b>REPAIRS &amp; REPLACEMENTS</b>				
Automobile	0.00	0.00	210.04	0.14
Electric System R & R	0.00	0.00	5,835.00	3.78
Janitorial	0.00	0.00	153.11	0.10
Landscape / non-contract	218.67	0.70	261.67	0.17
Plumbing Repairs	0.00	0.00	109.00	0.07
Pool / Water R & R	0.00	0.00	489.13	0.32
Repairs & Replacements	558.61	1.80	2,637.89	1.71
Supplies General	850.24	2.73	2,506.98	1.62
<b>TOTAL REPAIRS &amp; REPLACEMENTS</b>	<b>1,627.52</b>	<b>5.23</b>	<b>12,202.82</b>	<b>7.90</b>
<b>LEASING &amp; MARKETING</b>				
Resident Screening	20.00	0.06	242.80	0.16
<b>TOTAL LEASING &amp; MARKETING</b>	<b>20.00</b>	<b>0.06</b>	<b>242.80</b>	<b>0.15</b>
<b>PROFESSIONAL SERVICES</b>				

**Income Statement (Cash)**  
**575 / Windmill Partners - (mwind)**  
**May 2005**

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	Month to Date	%	Year to Date	%
Legal	0.00	0.00	3,020.75	1.96
Management	1,710.94	5.50	8,661.24	5.61
<b>TOTAL PROFESSIONAL SERVICES</b>	<b>1,710.94</b>	<b>5.50</b>	<b>11,681.99</b>	<b>7.56</b>
<b>ADMINISTRATIVE OFFICE</b>				
Bank Charges	0.00	0.00	5.00	0.00
Computer/Suplies/Support	0.00	0.00	77.92	0.05
Copies/Fax Supplies	0.00	0.00	188.05	0.12
Dues / Fees	886.50	2.85	886.50	0.57
Milage Reimbursement	0.00	0.00	239.76	0.16
Office Supplies and Expenses	47.14	0.15	1,901.33	1.23
Postage	0.00	0.00	106.05	0.07
Recreation Hall Expense	126.39	0.41	530.31	0.34
Telephone	139.49	0.45	651.07	0.42
<b>TOTAL ADMINISTRATIVE OFFICE</b>	<b>1,199.52</b>	<b>3.86</b>	<b>4,585.99</b>	<b>2.97</b>
<b>INSURANCE</b>				
Liability	0.00	0.00	455.34	0.29
<b>TOTAL INSURANCE</b>	<b>0.00</b>	<b>0.00</b>	<b>455.34</b>	<b>0.29</b>
<b>TAXES, LICENSES, FEES</b>				
Licenses, Permits	0.00	0.00	1,526.00	0.99
F.T.B.	0.00	0.00	800.00	0.52
<b>TOTAL TAXES, LICENSES, FEES</b>	<b>0.00</b>	<b>0.00</b>	<b>2,326.00</b>	<b>1.51</b>
<b>UTILITIES</b>				
Electricity	2,537.48	8.16	14,604.79	9.45
Electricity - Reimbursement	-3,032.77	-9.75	-17,008.30	-11.01
Gas	3,168.85	10.19	26,019.76	16.84
Gas - Reimbursement	-3,263.34	-10.50	-27,002.57	-17.48
Sewer	1,378.21	4.43	6,891.05	4.46
Water	815.46	2.62	3,371.14	2.18
<b>TOTAL UTILITIES</b>	<b>1,603.89</b>	<b>5.16</b>	<b>6,875.87</b>	<b>4.45</b>
<b>TOTAL OPERATING EXPENSE</b>	<b>13,932.94</b>	<b>44.82</b>	<b>76,337.99</b>	<b>49.42</b>
<b>NET OPERATING INCOME</b>	<b>20,285.90</b>	<b>65.25</b>	<b>96,886.81</b>	<b>62.72</b>
<b>OTHER EXPENSES</b>				
<b>DEBT SERVICE</b>				
1st Mortgage Interest	4,177.87	13.44	20,144.73	13.04
2nd Mortgage Interest	900.00	2.89	4,500.00	2.91
1st Mortgage Principal	2,676.54	8.61	14,127.32	9.15
<b>TOTAL DEBT SERVICE</b>	<b>7,754.41</b>	<b>24.94</b>	<b>38,772.05</b>	<b>25.10</b>
<b>TOTAL OTHER EXPENSES</b>	<b>7,754.41</b>	<b>24.94</b>	<b>38,772.05</b>	<b>25.10</b>
<b>OTHER INCOME</b>				
Bank Interest Income	0.00	0.00	255.94	0.17
<b>TOTAL OTHER INCOME</b>	<b>0.00</b>	<b>0.00</b>	<b>255.94</b>	<b>0.17</b>
<b>NET INCOME</b>	<b>12,531.49</b>	<b>40.31</b>	<b>58,370.70</b>	<b>37.79</b>

**Income-12 Statement (Cash)**  
**575 / Windmill Partners - (mwind)**  
**January 2005 - December 2005**

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Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RENT INCOME													
Gross Potential Re	30,839	30,648	30,848	30,848	31,089								154,473
Less: Concessions	295												295
Less: Delinquency		338	204	-542	710								710
Less: Mgmt / Emp.		295	295	295	295								1,178
Plus: Prepaid Rent	41	1	-1										41
NET RENT INCOME	30,585	30,216	30,349	31,095	30,085								152,331
OTHER OPERATING													
Trash	1,681	1,664	1,698	1,681	1,639								8,364
Sewer	1,490	1,473	1,507	1,490	1,456								7,416
Water	822	855	658	800	634								4,169
Application Fees					20	60							80
Late & NSF Fees		20	105	80	20								225
Laundry					15								15
R.V. Storage	125	125	125	125	125								625
TOTAL OTHER OPE	4,118	4,138	4,308	4,196	4,134								20,894
TOTAL OPERATING I	34,704	34,354	34,656	35,292	34,219								173,225
OPERATING EXPEN													
PAYROLL EXPENS													
Manager Salaries	2,500	2,500	2,667	2,708	2,781								13,156
Payroll Taxes	191	191	908	207	213								1,710
Workers Comp.	915	817	817	856	865	882							5,152
Health Ins.	1,065	1,065	1,065	1,065	1,238								5,499
Mpr. Util. / Elec.		125	125	125	125	125							625
Mpr. Cable	41	40	40	40	40								200
TOTAL PAYROLL E	4,712	4,738	5,522	5,001	5,261	1,007							26,341
CONTRACT SERVIC													
Answering Service	120	105	112	131	125	148							741
Billing Service	233	255	233	233	234								1,188
Garbage Removal	2,250	2,150	2,150	2,150	2,150	2,150							13,002
CONTRACT	2,603	2,510	2,495	2,514	2,510	2,298							14,931
REPAIRS & REPLA													
Automobile		105		105		374							584
Electric System R	409		733	4,693									5,835
Janitorial			153										153
Landscape / non-c		23		20	219								262
Plumbing Repairs			109										109
Pool / Water R &	356	117	117	17		23							513
Repairs & Replace	350	11	895	823	559	41							2,679
Street Replaceme						38,500							38,500
Supplies General	781	401		475	850								2,507
TOTAL REPAIRS &	1,540	895	2,007	6,133	1,628	38,938							51,141
LEASING & MARK													
Resident Screenin	60			163	20								243
TOTAL LEASING &	60			163	20								243
PROFESSIONAL SE													
Legal	836	616	1,391	78									3,021
Management	1,735	1,718	1,733	1,765	1,711								8,661
TOTAL PROFESSIO	2,671	2,334	3,123	1,843	1,711								11,682
ADMINISTRATIVE O													
Bank Charges		5											5
Computer/Supplies/			78										78
Copies/Fax Suppli			158	30									188
Dues / Fees				887									887
Mileage Reimburse		240											240
Office Supplies an	109	95	1,237	413	47	158							2,060
Postage		62		44		74							180
Recreation Hall Ex	36	84	152	132	126	116							645
Telephone		239	133	139	139								651
TOTAL ADMINISTR	145	485	1,997	759	1,200	347							4,933

**Income-12 Statement (Cash)**  
**575 / Windmill Partners - (mwind)**  
**January 2005 - December 2005**

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Account Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
INSURANCE Liability	455												455
TOTAL INSURANCE	455												455
TAXES, LICENSES, Licenses, Permits F.T.B.	482	1,222		-178		600							2,126
		800											800
TOTAL TAXES, LICE	482	2,022		-178		600							2,926
UTILITIES													
Electricity	3,365	3,124	2,756	2,821	2,537								14,605
Electricity - Reimb	-3,634	-3,754	-3,513	-3,076	-3,033								-17,008
Gas	7,721	6,754	4,625	3,751	3,169								26,020
Gas - Reimbursem	-5,984	-7,023	-6,838	-3,915	-3,263								-27,003
Sewer		2,756	1,378	1,378	1,378								6,891
Water		1,323	585	648	815								3,371
TOTAL UTILITIES	1,488	3,181	-1,005	1,608	1,604								6,878
TOTAL OPERATING	14,157	16,165	14,240	17,843	13,933	43,191							119,529
NET OPERATING IN	20,547	18,189	20,417	17,448	20,286	-43,191							53,696
OTHER EXPENSES													
DEBT SERVICE													
1st Mortgage Inter	3,911	3,957	4,027	4,073	4,178	4,239							24,384
2nd Mortgage Inter	900	900	900	900	900								4,500
1st Mortgage Princ	2,944	2,898	2,828	2,782	2,677	2,615							16,743
TOTAL DEBT SERVI	7,754	7,754	7,754	7,754	7,754	6,854							45,626
TOTAL OTHER EXP	7,754	7,754	7,754	7,754	7,754	6,854							45,626
OTHER INCOME													
Bank Interest Inco	59	55	68	73									256
TOTAL OTHER INC	59	55	68	73									256
NET INCOME	12,852	10,490	12,730	9,767	12,531	-50,045							8,325

**4.2 *Windmill Mobile Estates, March 2007 Rent Roll***

1. DAVIS, HANES 36.98 16.80 15.50 32.40 16.74 16.90

2. ANDY & LUCY STEFFENSEN 36.59 36.87 9.05 57.16 30.00 16.74 16.90

3. DAUBERG, LEN

26.03

8.59

6.83

336.34

16.74

16.90

4. KELLY, PATRICK

31.3

16.74

16.90

5. BURGESS, DON

31.2

16.74

16.90

6. SCHRADER, PAMELA

36.66

27.27

6.83

775.00

16.74

16.90

7. MILLER, MARGARET

38.52

19.09

6.78

340.25

16.74

16.90

8. HARRIS, ROBERT

31.1

16.74

16.90

9. RODRIGUEZ, LUCILLE

31.2

16.74

16.90

10. LARRY VOGEN/MARIAN

40.11

46.36

7.94

645.00

16.74

16.90

11. BROWN, ROBERT

31.3

16.74

16.90

12. BROWN, ROBERT

31.3

16.74

16.90

13. SOBECK, MARY & PAUL

49.49

27.82

10.16

335.01

16.74

16.90

14. MERCER, THOMAS & ANTONIA

34.24

37.10

7.94

606.46

16.74

21.12

35.00

15. STERLING, DONALD

32.13

12.33

332.79

16.74

21.12

35.00

16. GALLI, ROBERT

31.3

16.74

16.90

17. GALLI, TERESA

84.98

20.25

6.78

332.36

16.74

16.90

CR. FED.

18. GUTIERREZ, CHRISTINA

78.77

32.98

30.16

535.13

16.74

21.12

19. HARRIS, ROBERT

31.3

16.74

16.90

20. HARRIS, ROBERT

31.3

16.74

16.90

21. BOLDING/PACHO

40.11

40.54

7.94

413.16

16.74

21.12

22. BROWN, ROBERT

31.3

16.74

16.90

23. BROWN, ROBERT

31.3

16.74

16.90

24. BROWN, ROBERT

38.52

14.38

5.67

293.14

16.74

16.90

25. SCHULTZ, DALLAS

58.68

34.02

6.83

332.88

16.74

16.90

26. SCHULTZ, DALLAS

58.68

34.02

6.83

332.88

16.74

16.90

27. VOGEN, MARIAN

40.11

40.54

7.94

413.16

16.74

21.12

28. LARA EVANS

50.67

52.47

12.39

404.74

16.74

16.90

35.00

29. VADA BERRY

43.63

50.65

11.28

326.68

16.74

16.90

PETER GROUT/FBI

## WINDMILL MOBILE ESTATES

## WINDMILL MOBILE ESTATES

\* = Medical    # = CARE    E = All Electric

M = Management    D = M.H. Dealer    V = Vac

SPECIAL UTILITY RATE CODES

SPECIAL CONCESSIONS CODES

		Gas	Ele	Water	Late	RENT	SEWER	R.V. STOR	TEMP. CHG.	PETER CONCESSION	Bal.
31	COFF, KAREN	46.10	14.986	11.301	36.26	16.74	16.40				
32	HOME, RICHARD & SITTE	46.81	26.45	7.901	265.27	16.74	16.90				
33	GRACIELA PINOT	56.53	36.42	9.05	326.40	16.74	21.12				
34	ANTHONY, TERENCE & SUE	40.05	8.12	14.54	416.71	16.74	21.12				
35	PEPE, E.	47.43	87.62	6.83	40.10	16.74	21.12				
36	MOATS, ED	*# 9.56	#* 93.05	11.22	594.62	16.74	16.90				
37	CAKING, ALAN	74.58	30.58	14.61	371.19	16.74	16.90				
38	COFF, DON & DONNA LIPSON	33.55	7.78	12.82	360.4	30.01	16.74	16.90			
39	WILSON, JILL	51.84	25.42	13.05	333.48	16.74	16.90				
40	HUSON, LUCILLE	51.84	49.21	9.05	310.67	16.74	16.90				
41	WHITE, RENEE	62.41	38.30	11.28	386.99	16.74	16.90				
42	WATKINS, MARY	46.24	18.56	9.11	42.26	16.74	21.12				
43	CECILIA HEDDEN	38.93	22.56	7.94	401.71	16.74	21.12				
44	CAITTO, SUSAN	91.31	27.94	9.05	361.70	16.74	16.90				
45	WHITE, FERN & KAREN	42.46	27.48	11.28	333.48	16.74	16.90				
46	JOSEPH, GENE	62.41	38.30	11.28	386.99	16.74	16.90				
47	STEWART, NANCY	44.81	24.05	9.05	393.72	16.74	21.12				
48	BASTLE, DEBORAH	26.03	26.22	6.83	310.67	16.74	21.12				
49	ROBINSON, GARETH	51.19	52.75	11.28	395.63	30.00	16.74	21.12			
50	BRIGGS, MARY M.	67.16	93.62	6.83	377.25	16.74	21.12				
51	MOORE, JIM & DOTTIE	70.62	48.82	14.61	390.94	16.74	21.12				
52	REFREDO, L.	44.81	59.28	11.28	517.04	30.00	16.74	21.12	33.00		
53	STRIVENS, ROBERT	59.68	56.4	3.50	310.67	16.74	16.90				
54	WADE, BOB & JULIE	63.57	38.13	16.16	340.64	16.74	16.90				
55	KREIN, DONNA	87.13	21.87	7.94	408.44	16.74	21.12				



**SPECIAL UTILITY RATE CODES**

**M = Management      D = M:H: Dealer      V = V**

70	MATHERS, JOAN	74.58	30.69	10.16	362.92	16.74	16.90
74	MOORE, KEVIN	40.11	36.76	5.72	400.14	16.74	21.12
76	WILLIAMS, MARIE	24.50	10.66	3.81	324.72		
77	J. SANCHEZ & BABY CLARK	57.71	31.49	12.39	800.00	16.74	16.90
78	BOLIVAR						
79	VICARRA, LUCILLE	23.68	9.16	5.72	355.32	16.74	16.90
80	MIKE & LUCILLE TUCKER	30.2	14.86	7.94	314.06		
81	MIKE & LUCILLE TUCKER	30.67	14.24	5.81	391.31		
81	TUCKER, MIKE & DEBRA	35.42	45.45	11.28	335.93	16.74	21.12
82	MIKE & LUCILLE TUCKER	30.2	14.22	5.81	329.31		
84	TOWER, MARY	47.15	22.90	6.83	353.25	16.74	16.90
85	SULLIVAN, KEVIN & ELAINE	* 65.92	* 57.16	19.05	381.54	16.74	16.90
86	DEBRA DIELH	38.42	19.24	12.28	364.22		
87	RONALD P. SERGI	37.77	19.84	5.72	355.90	16.74	16.90
88	DEBRA DIELH/RONALD SERGI	# 17.03	# 19.84	5.72	355.90	16.74	16.90
89	RONALD P. SERGI	37.77	23.48	10.16	605.48	16.74	21.12
90	RONALD P. SERGI	37.77	23.48	10.16	605.48	16.74	21.12

## TOTAL LISTING REPORT

## WILMINGTON MOBILE ESTATES

Due Date 07/07

SPECIAL CONCESSIONS CODES

\* = Medical   \* = CARE   E = All Electric

M = Management

D = M.H. Dealer

V = Vacant

Gas      ELE      Water      Late      RENT

PARKING      SEWER      R.V. STOR

REFUSE      TEMP. CHA.

WATER      RENT

PARKING      SEWER

REFUSE      TEMP. CHA.

WATER      RENT

## WILMINGTON MOBILE ESTATES

## SUMMARY OF CHARGES

GAS AMOUNT 4,897.51

ELECTRIC BILLED 3,276.41

WATER AMOUNT 916.70

LATE CHARGE 0.00

RENT 35,210.28

PARKING 274.00

SEWER 3,506.66

TRASH 1,672.92

R.V. STOR 280.00

TEN. CHARGE 0.00

TEN. CHARGE 413.56

PETER CREDIT -137.00

BAL. FWD. -2,778.61

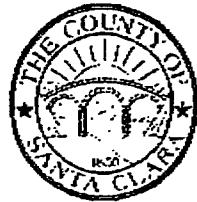
THE RATES  
ARE SUBJECT TO CHANGE  
WHEN RECEIVED FROM THE UTILITY CO. WE CURRENTLY TRADE  
REMINDER TO ALL OUR CUSTOMERS: PLEASE NOTE THAT ALL RATES ARE POSTED  
AND GAS COMPANIES. IT IS THE LOCAL PARK MANAGEMENT OR MANAGEMENT CO. RESPONSIBILITY TO GET ALL PERTINENT WATER RATE INFORMATION  
BE AWARE THAT MANY LOCAL CITY AND COUNTY GOVERNMENTS ARE NOW INSTITUTING NEW TAXES ON METERED UTILITIES. YOU WILL RECEIVE  
TAKE EFFECT AND WILL HAVE TO NOTIFY US WITH WRITTEN DOCUMENTATION OF THESE NEW OR MODIFIED TAXES.

**4.3    *County of Santa Clara Notice of Enrollment of Escape  
Assessment***

# Office of the Assessor

County of Santa Clara

County Government Center, East Wing  
70 West Hedding Street, 5th Floor  
San Jose, CA 95110-1771  
(408) 279-5500 [www.sco-assessor.org](http://www.sco-assessor.org)



## NOTICE OF ENROLLMENT OF ESCAPE ASSESSMENT

Lawrence E. Stone, Assessor

MAIL DATE: JULY 6, 2007

PW PROPERTY INVS LLC  
PETER WANG  
473 HOPE ST #1  
MOUNTAIN VIEW CA 94041

Dear Property Owner,

As stated in the recently provided Notice of Proposed Escape Assessment, incorrect values were enrolled on one or more recent Assessment Rolls for property located at:

575 SAN PEDRO AV  
MORGAN HILL CA 95037-5228

This office has now processed a value correction to each of these Assessment Rolls. The corrected values for each of the affected roll years are summarized below.

The values shown (plus any taxable business fixtures and personal property and minus any exemptions for which you may qualify) will be the basis for your corrected tax bill(s). Page two of this letter explains the procedures to follow if you have any question regarding the corrected values, or if you wish to appeal the Assessor's determination of assessed values. For more information, please contact Beverly Brown at (408) 299-5377.

ASSESSOR'S PARCEL NUMBER (A.P.N.): 817-11-005

PETITION NUMBER: E06156

YEAR: 2006-2007

### PREVIOUS VALUES:

LAND	1,273,555
*IMPROVEMENTS	1,034,380
TOTAL VALUE	2,307,935

### VALUES AS CORRECTED:

LAND	3,910,000
*IMPROVEMENTS	400,000
TOTAL VALUE	4,310,000

Net Change: 2,002,065

\*IMPROVEMENTS - This is the value of any BUILDINGS or STRUCTURES existing on the land whether NEW or OLD.

Assessor's Office Mission: Produce an annual assessment roll including all assessable property in accordance with legal mandates in a timely, accurate, & efficient manner; & provide current assessment-related information to the public and governmental agencies in a timely & responsive way.

# Office of the Assessor

County of Santa Clara

County Government Center, East Wing  
70 West Hedding Street, 5th Floor  
San Jose, CA 95110-1771  
(408) 299-5500 [www.scc-assessor.org](http://www.scc-assessor.org)



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Lawrence E. Stone, Assessor

## NOTIFICATION OF CORRECTED/ESCAPE ASSESSMENT

### YOUR RIGHT TO AN INFORMAL REVIEW

If you have any questions regarding these values or if you believe the referenced property to be worth less than the values indicated, please contact the Real Property Division of the Assessor's Office. Please refer to the Assessor's Parcel Number (APN) as shown on page one if you call or write this office. The County Assessor's Office is located in the County Government Center, 5th floor, East Wing, 70 West Hedding Street, San Jose, California 95110. The telephone number is (408) 299-5500.

### YOUR RIGHT TO APPEAL

If you believe the referenced property to be worth less than the values indicated above, relief may be sought by filing an Application for Changed Assessment with the Clerk of the Board of Supervisors. Application forms may be obtained from the Clerk of the Board of Supervisors, County Government Center, 10<sup>th</sup> floor, East Wing, 70 West Hedding Street, San Jose, California 95110. The telephone number is (408) 299-5001.

### FILING DEADLINES

In general, an Application for Changed Assessment must be filed within 60 days of the date of this notification or the postmark date on the envelope in which the notice was mailed, whichever is later.

An application is considered timely filed if: (1) it is sent by U.S. mail, properly addressed with postage prepaid, postmarked on or before the filing deadline; or (2) the Appeals Board is satisfied that the mailing occurred by the filing deadline. If the filing deadline falls on a Saturday, Sunday, or a legal holiday, an application that is mailed and postmarked on the next business day shall be considered timely filed.

DETACHMENT

PW PROPERTY INVS LLC  
PETER WANG  
473 HOPE ST #1  
MOUNTAIN VIEW CA 94041

PROPERTY ADDRESS  
575 MORGAN HILL 95037 SAN PEDRO  
ISSUE DATE JANUARY 1, 2006  
OWNER NAME KATHY M. HILL  
OWNER ADDRESS 1111 N. 10TH AV  
PHONE NUMBER 408-747-1010  
EXPIRATION DATE 1/6/07

**IMPORTANT - TO ENSURE PROPER CREDIT RETURN THE APPROPRIATE PAYMENT STUB WITH YOUR PAYMENT. THE 1ST INSTALLMENT MUST BE PAID BEFORE OR WITH THE 2ND INSTALLMENT.**

PAY YOUR TAXES ONLINE AT [WUNN.SCTAX.ORG](http://WUNN.SCTAX.ORG) USING e-CHECK OR MAJOR CREDIT CARD. SEE REVERSE FOR PAYMENT INSTRUCTIONS.



ASA

4.4 *Principles of Corporate Finance", Richard A. Brealy and Stewart C. Myers, McGraw Hill, Chapter 6, pp. 96-98*

The proper comparison, which is with or without, is as follows:

Before	Take Project	After	Cash Flow, with Project
Firm owns land	→	Firm still owns land	0
Do Not Take Project		After	Cash Flow, without Project
	→	Firm sells land for \$100,000	\$100,000

Comparing the two possible "afters," we see that the firm gives up \$100,000 by undertaking the project. This reasoning still holds if the land will not be sold but is worth \$100,000 to the firm in some other use.

Sometimes opportunity costs may be very difficult to estimate;<sup>2</sup> however, where the resource can be freely traded, its opportunity cost is simply equal to the market price. Why? It cannot be otherwise. If the value of a parcel of land to the firm is less than its market price, the firm will sell it. On the other hand the opportunity cost of using land in a particular project cannot exceed the cost of buying an equivalent parcel to replace it.

**Beware of Allocated Overhead Costs.** We have already mentioned that the accountant's objective in gathering data is not always the same as the investment analyst's. A case in point is the allocation of overhead costs. Overheads include such items as supervisory salaries, rent, heat, and light. These overheads may not be related to any particular project, but they have to be paid for somehow. Therefore, when the accountant assigns costs to the firm's projects, a charge for overhead is usually made. Now our principle of incremental cash flows says that in investment appraisal we should include only the *extra* expenses that would result from the project. A project may generate extra overhead expenses—and then again it may not. We should be cautious about assuming that the accountant's allocation of overheads represents the true extra expenses that would be incurred.

---

Treat  
Inflation  
Consistently

Interest rates are usually quoted in *nominal* rather than *real* terms. In other words, if you buy a Treasury bill the government promises to pay you, say, \$10,000. It makes no promises about what \$10,000 will buy. Investors take that into account when they decide what is a fair rate of interest.

For example, suppose that the rate of interest on a 1-year United States Treasury bill is 8 percent and that next year's inflation is expected to be 6 percent. If you buy the bill, you get back principal and interest in period 1 dollars, which are worth 6 percent less than current dollars:

Invest Current Dollars	Receive Period 1 Dollars	Result
\$10,000	→ \$10,800	8% nominal rate of return

<sup>2</sup> They may be so difficult to estimate that it is often preferable just to note their existence rather than attempt to quantify them.

How much actual purchasing power is represented by the \$10,800 return? Let us measure units of purchasing power in terms of current dollars. We convert period 1 dollars into current dollars by dividing by 1.06 (1 plus the expected inflation rate).<sup>3</sup>

$$\text{Purchasing power of } 10,800 \text{ period 1 dollars} = \frac{\text{number of current dollars having same purchasing power}}{1.06} = \frac{10,800}{1.06} = \$10,188.68$$

This is the *real* payoff to the bill holder:

Invest Current Dollars	Expected Real Value of Period 1 Receipts	Result
\$10,000	→ \$10,188.68	Expected real rate of return is .0187, or about 1.9%

Thus we could say "The bill offers an 8 percent nominal rate of return" or "It offers a 1.9 percent expected real rate of return." Note that the nominal rate is certain but the real rate is only expected. The actual real rate cannot be calculated until period 1 arrives and the inflation rate is known.

If the discount rate is stated in nominal terms, then consistency requires that cash flows be estimated in nominal terms, taking account of trends in selling price, labor and materials cost, etc. This calls for more than simply applying a single assumed inflation rate to all components of cash flow. Labor cost per hour of work, for example, normally increases at a faster rate than the consumer price index because of improvements in productivity and increasing real wages throughout the economy. Tax shields on depreciation do not increase with inflation; they are constant in nominal terms because tax law in the United States allows only the original cost of assets to be depreciated.

Of course, there is nothing wrong with discounting real cash flows at a real discount rate, although this is not commonly done. Here is a simple example showing the equivalence of the two methods.

Suppose your firm usually forecasts cash flows in nominal terms and discounts at a 15 percent nominal rate. In this particular case, however, you are given project cash flows estimated in real terms, that is, current dollars:

REAL CASH FLOWS, THOUSANDS OF DOLLARS			
$C_0$	$C_1$	$C_2$	$C_3$
-100	+35	+50	+30

It would be inconsistent to discount these real cash flows at 15 percent. You have two alternatives: Either restate the cash flows in nominal terms and discount at 15 percent, or restate the discount rate in real terms and use this to discount the real cash flows. We will now show you that both methods produce the same answer.

<sup>3</sup> A 6 percent inflation rate means that \$1.00 now has the same purchasing power as \$1.06 next year. Thus, the real purchasing power of \$10,800 next year is \$10,800/1.06. Real purchasing power is measured in terms of today's dollars.

Assume that inflation is projected at 10 percent a year. Then the first cash flow for year 1, which is \$35,000 in current dollars, will be  $35,000 \times 1.10 = \$38,500$  in year 1 dollars. Similarly the cash flow for year 2 will be  $50,000 \times (1.10)^2 = \$60,500$  in year 2 dollars, and so on. If we discount these nominal cash flows at the 15 percent nominal discount rate, we have

$$NPV = -100 + \frac{38.5}{1.15} + \frac{60.5}{(1.15)^2} + \frac{39.9}{(1.15)^3} = 5.5, \text{ or } \$5500$$

Instead of converting the cash-flow forecasts into nominal terms, we could convert the discount rate into real terms by using the following relationship:

$$\text{Real discount rate} = \frac{1 + \text{nominal discount rate}}{1 + \text{inflation rate}} - 1$$

In our example this gives

$$\text{Real discount rate} = \frac{1.15}{1.10} - 1 = .045, \text{ or } 4.5\%$$

If we now discount the real cash flows by the real discount rate, we have an NPV of \$5500, just as before:

$$NPV = -100 + \frac{35}{1.045} + \frac{50}{(1.045)^2} + \frac{30}{(1.045)^3} = 5.5, \text{ or } \$5500$$

Note that the real discount rate is approximately equal to the *difference* between the nominal discount rate of 15 percent and the inflation rate of 10 percent. Discounting at 5 percent would give  $NPV = \$4600$ —not exactly right, but close.

The message of all this is quite simple. Discount nominal cash flows at a nominal discount rate. Discount real cash flows at a real rate. Obvious as this rule is, it is sometimes violated. For example, in 1974 there was a political storm in Ireland over the government's acquisition of a stake in Bula Mines. The price paid by the government reflected an assessment of £40 million as the value of Bula Mines; however, one group of consultants thought that the company's value was only £8 million and others thought that it was as high as £104 million. Although these valuations used different cash-flow projections, a significant part of the difference in views seemed to reflect confusion about real and nominal discount rates.<sup>4</sup>

## 6-2 EXAMPLE—IM&C PROJECT

As the newly appointed financial manager of International Mulch and Compost Company (IM&C), you are about to analyze a proposal for marketing guano as a garden fertilizer. (IM&C's planned advertising campaign features a rustic gentleman who steps out of a vegetable patch singing, "All my troubles have guano way.")<sup>5</sup>

You are given the forecasts shown in Table 6-1. The project requires an investment of \$10 million in plant and machinery (line 1). This machinery can be dismantled and sold for net proceeds estimated at \$1 million in year 7 (line 1, column 7). This amount is the plant's *salvage value*.

<sup>4</sup> In some cases it is unclear what procedure was used. At least one expert seems to have discounted nominal cash flows at a real rate. For a review of the Bula Mines controversy see E. Dimson and P. R. Marsh, *Cases in Corporate Finance*, Wiley International, London, 1987.

<sup>5</sup> Sorry.

**4.5 *Buyer's/Borrower's Settlement Statement, ICAGO Title Company***



## CHAGO TITLE COMPANY

## BUYER'S/BORROWER'S SETTLEMENT STATEMENT

PAGE: 01

ESCROW NUMBER: 05660-051039556-001 ORDER NUMBER: 05660-051039556

LOSING DATE: 08/05/05 CLOSER: Gus Aguilar

BUYER: PW PROPERTY INVESTMENTS, LLC and wang01pete@aol.com

SELLER: INVESTMENT PROPERTY EXCHANGE SERVICES, INC., as Qualified Intermediary  
under Exchange No. EX-02-17898 for Windmill Partners

PROPERTY: 575 East San Pedro Avenue, Morgan Hill, CA

	CHARGE BUYER	CREDIT BUYER
Sales Price	\$ 4,310,000.00	\$
Deposits		
Received 08/04/05 DEPOSIT	458,000.00	
Received 08/04/05 DEPOSIT	700,000.00	
Received 06/02/05 DEPOSIT	500,000.00	
TOTAL RECEIPTS		1,658,000.00
Accrued interest on deposit		626.67
New Loan From Washington Mutual Bank		2,710,000.00
Loan Charges To Washington Mutual Bank		
Interest from 08/05/05 to 09/01/05 @ \$ 375.1100/day	10,127.97	
Application Fee paid to Lender		
Appraisal Fee paid to Lender		3,500.00
Loan Origination Fee		5,000.00
Tax Service Fee	27,100.00	
Appraisal Fee	73.00	
Processing Fee	5,000.00	
Wire Fee	2,710.00	
UCC Fee	50.00	
Flood Certification Fee	28.00	
	16.00	
Hazard Ins Premium To California SoWestern	9,667.00	
Prorations And Adjustments		
Rents from 08/01/05 to 08/05/05	4,105.87	
Total amount \$ 30,794.00 for 30 days		
Resident Sewer from 08/01/05 to 08/05/05	200.93	
Total amount \$ 1,507.00 for 30 days		
Resident Refuse from 08/01/05 to 08/05/05	225.87	
Total amount \$ 1,694.00 for 30 days		
County Taxes from 07/01/05 to 08/05/05		
Total amount \$ 14,639.31 for 180 days	2,846.53	
Sewer from 08/01/05 to 08/05/05		
Total amount \$ 1,378.21 for 30 days	183.76	
Refuse from 08/01/05 to 08/05/05		
Total amount \$ 2,150.40 for 30 days	286.72	
Answering Service from 08/01/05 to 08/05/05		
Total amount \$ 100.00 for 30 days	13.33	
Settlement or Closing Fee To Chicago Title Company		
Document Preparation To Chicago Title Company	1,680.53	
Concurrent Lender's Title Insurance	50.00	
Courier/Oversight Delivery Fees	1,986.00	
Recording Fees	52.50	
	250.00	
Investment Account Set-Up Fee		
Loan-Tie-In Fee	50.00	
Funds Due To Buyer At Closing	200.00	
	6,883.34	

DATE: 08/29/05 15:06:42



CHICAGO TITLE COMPANY

BUYER'S/BORROWER'S SETTLEMENT STATEMENT

PAGE: 02

ESCROW NUMBER: 05660-051039556-001 ORDER NUMBER: 05660-051039556

CLOSING DATE: 08/05/05 CLOSER: Gus Aguilar

CHARGE BUYER CREDIT BUYER

TOTALS

\$ 4,380,457.01 \$ 4,380,457.01  
===== =====

## *Appendix 5*

**5.1    “Using Present Value Analysis”, published in the Real Estate Center Journal by the Real Estate Center at Texas A&M.**

**5.1    “Using Present Value Analysis”, published in the Real Estate Center Journal by the Real Estate Center at Texas A&M.**

## Using Present Value Analysis

Wayne E. Etter

In a previous Instructor's Notebook, the basic idea of present value was presented along with some of the attributes that cause present value analysis to be used for analyzing investments.

- All cash flows during the life of the investment are considered. This includes the investment outlay, both positive and negative operating cash flows and appreciation.
- The timing of all cash flows is considered. Present value analysis makes those projects with delayed investment outlays or those producing cash flows sooner more attractive than those projects with immediate investment outlays or those producing delayed cash flows.
- Present value analysis considers an investor's desire to reinvest the cash benefits derived from the investment.

Present value analysis is used to determine a project's acceptance/rejection by calculating a proposed investment's net present value and internal rate of return. This Instructor's Notebook focuses on the investor's required rate of return and these two present value issues.

An investor uses different required rates of return for different investments because the risk of all investments is not the same; finally, as the level of risk increases, the required rate of return is increased. Although risk considerations are beyond the scope of this article, it is necessary to understand only that an investor establishes a required rate of return for all investments being considered. The level of risk inherent in each investment is reflected in the required rate of return.

**Net Present Value.** Using the investor's required return to calculate the present value of the future benefits and subtracting the investment's cost from the present value of the future benefits gives the investment's net present value. For example, an investor with a required rate of return of 15 percent is considering an investment that costs \$2,284 and promises \$1,000 annual cash benefits for three years. What is the net present value?

Year	Annual Cash Benefit	15% Present Value Factor	Present Value
1	\$1,000	.870	\$ 870
2	1,000	.756	756
3	1,000	.658	658
Present value of cash benefits			2,284
Cash outlay			2,284
Net present value			\$ 0

If the net present value is zero (the present value of the future benefits is equal to their cost), the investment's return will be equal to the investor's required rate of return. A better understanding of the net present value of zero provides the required rate of return and by considering the following example:

Year	Cash Flow	15% Return	Investment Recovery	Outstanding Investment
0	-\$2,284			\$2,284.00
1	1,000	\$342.60	\$657.40	1,626.60
2	1,000	243.99	758.01	870.59
3	1,000	130.59	869.41	\$ 1.18

As shown, the first year's cash flow of \$1,000 provides the investor with a 15 percent return on the \$2,284 invested for the first year and reduces the amount of unrecovered investment by \$657.40. By the end of the third year, the amount invested has been recovered—the small remainder results from rounding—and the investor has earned 15 percent each year on the amount of the unrecovered investment. Thus, the rate of return accounts for both the return on and the return of the investment.

The present value of an income stream discounted at the required rate of return is the price that must be paid for the future benefits if the required rate of return is to be earned. When the present value of the benefits exceed their cost, the net present value is positive, and the investor receives a return in excess of the required return. If the net present value is negative, the investment's return will be less than the investors required return. For any given set of cash benefits and cash outlay, an increase in the required rate of return decreases the investment's net present value. If the required return becomes too great, the net present value becomes negative.

When two or more projects are being compared, they can be ranked according to their net present value. All other things being equal, the project with the largest net present value will be selected because it will maximize the investor's wealth.

**Internal Rate of Return.** An investment's expected rate of return can be compared directly with the investor's required return. In the discussion of net present value, it was observed that there is a particular rate of discount that will make the net present value equal to zero. This rate is known as the *internal rate of return*. To find this rate, trial discount rates are chosen until the rate that results in a net present value of zero is found. As Figure 1 shows, a positive net present value of \$37 is obtained with a discount rate of 14 percent. Because a net present value of zero is desired, a higher rate, say 16 percent, is tried. This rate yields a negative \$38 net present value. Finally, a discount rate of 15 percent is used and a net present value of zero results.

Financial calculators and electronic spreadsheet programs make this calculation in a similar fashion—electronic spreadsheet programs, for instance, require a "guess" rate to begin the calculation of the internal rate of return.

As with the net present value method, the internal rate of return is used to compare alternatives. When two or more projects are being compared, the projects can be ranked according to their internal rate of return; each also is compared with the investor's required rate of return. Projects A and B have internal rates of return in excess of the investor's required rate of return and are acceptable; projects C and D have internal rates of return less than the investor's required rate of return and are not acceptable.

structor's Notebook presents a lecture on a basic real estate subject. Written by an expert, *structor's Notebook* takes readers into the classroom to hear the professor's talk. This regular feature is designed as an introductory lecture on a different topic each issue.

only one project can be funded, the project with the largest internal rate of return ordinarily will be selected because choosing it maximizes the investor's wealth (assuming that all alternatives are equal in risk).

To use present value analysis, one must have a clear understanding of net present value and the internal rate of return methods. Investors calculate both the net present value and the internal rate of return for each investment. Others prefer to use only the internal rate of return because they understand the general concept of return. Therefore, they rely on it to determine if an investment's return is adequate relative to the required rate of return and for ranking alternative investments.

Is the use of the internal rate of return instead of net present value in real estate investment analysis a problem? Ordinarily, this is not a problem because both usually result in the same ranking of alternative investments. However, this question arises because it is possible for an investor choosing between two mutually exclusive alternatives (choosing between financing proposals, for example) to prefer that one alternative generates the largest net present value if the other generates the largest internal rate of return. Although circumstances that result in such conflicts are not common in the analysis of income properties, exploring this question provides additional insight into these two approaches to measuring an investment's expected return.

Although investors have many goals, their ultimate investment is assumed to be wealth maximization. Using this as a guide, the example of an investment costing \$2,284 and providing \$1,000

Thus, because of the reinvestment of the cash flows at 15 percent, both investments will accumulate to the same future value. If the reinvestment of the annual \$1,000 cash flows is not possible or if reinvestment will take place at a rate less than 15 percent, the alternative investment providing \$3,474 in three years would be preferred. Accordingly, it can be seen that when an internal rate of return is being calculated, it is assumed that the cash flows will be reinvested at the internal rate of return. But when a large internal rate of return is calculated, it may not be possible to find other investments with equally large expected returns in which to reinvest the cash flows.

On the other hand, in the calculation of the net present value, the required rate of return is the reinvestment rate. The required rate of return should reflect realizable returns in the market for a given level of risk; furthermore, it is assumed that an investor will not invest at a rate less than the required rate of return; if this happens, the required rate of return has been improperly established.

The net present value method is used to choose between alternatives when there is a ranking conflict between the net present value and the internal rate of return. Why? With the net present value method, reinvestment of the cash flows takes place at the investor's required rate of return, but with the internal rate of return method, reinvestment of the cash flows must take place at the internal rate of return. The internal rate of return can vary from project to project; this, in turn, results in a varying reinvestment rate assumption from project to project. However, the reinvestment rate assumption is constant from project to project when the net present value method is used. Furthermore, when the cash flows are reinvested at the required rate of return, the project with the largest net present value will maximize the investor's wealth.

Calculating the net present value also is superior to calculating the internal rate of return if the annual cash flows change from positive to negative to positive during the holding period. Under these circumstances, calculating the internal rate of return can result in multiple internal rates of return. No such possibility exists when calculating net present value.

Once the proper interpretation of the net present value method is firmly grasped, another advantage appears—it is easier to calculate than the internal rate of return. Only a present value table and a simple calculator are required whereas a financial calculator or a computer is necessary to quickly calculate the internal rate of return for a real estate investment having uneven cash flows over a long holding period.  $\square$

*Dr. Etter is a professor with the Real Estate Center and of finance at Texas A&M University.*

Year	Annual Cash Benefit	15% Present Value Factor	Present Value
1	\$1,000	.870	\$ 870
2	1,000	.783	783
3	1,000	.653	653
Present value of benefits		2,284	
Cash outlay		2,284	
Net present value		\$ 0	
Internal rate of return		15%	

Initial cash benefits for three years will be re-examined. It was shown that this investment provides the investor with a 15 percent internal rate of return. However, if \$2,284 is invested in an alternative investment at a 15 percent compound rate for three years, it will become \$3,474. Why would an investor not prefer this investment to one that produces annual cash flows of \$1,000? Because a basic assumption of net present value analysis is that cash flows are reinvested. If each of the three cash flows is reinvested at 15 percent when it is received, the future value of these cash flows is \$3,474:

Year	Accumulation from Previous Year	Cash Flow Reinvested at End of Year	Interest at 15%	Total
1	\$ 0	\$1,000		\$1,000
2	1,000	1,000	\$150	2,150
3	2,150	1,000	324	3,474

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Watsonville, CA 95076

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**Richard S. Fabrikant, MBA, PhD  
Business/Financial Economist**

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**EDUCATION**

Fulbright-Hays Scholar (1978-1979)  
University of Shiraz, Shiraz Iran  
University of New South Wales, NSW Australia

PhD (1975) Economics, University of California,  
Santa Barbara, CA.  
Econometrics, Urban and Regional Economics,  
International Trade & Finance

MBA (1967) Finance, Wharton Graduate School of Finance and Commerce, University  
of Pennsylvania, Philadelphia, PA  
Forecasting, Corporate Finance, Money and Banking

BS (1965) Management Science, Rensselaer Polytechnic Institute, Troy, NY  
Operations Research, Industrial Engineering

**PROFESSIONAL EXPERIENCE**

1988 - Present CONSULTANT IN BUSINESS ECONOMICS & FINANCE

- Economic feasibility, cost/benefit analysis and financial arrangements for property development.
  - Low income housing projects.
  - Commercial and retail development studies.
- Business development and strategic planning.
- Advisory services to private and public organizations, institutions and businesses in contract negotiations, capital funding, and economic impact studies.
  - School District
  - City incorporation
  - Economic development of central business districts
  - Urban and regional planning
- Rent adjustment feasibility studies for mobile home parks.
  - Over 20 studies carried out in California
- Business reorganization strategies, mergers and acquisitions, financial planning, and tax impact analysis.
- Mathematical modeling for financial markets, portfolio optimization and forecasting.
- Business valuations of professional corporations, commercial establishments, manufacturing firms, service companies, trusts and family limited partnerships.
- Forensic economics and expert testimony. Court approved expert in Monterey, Santa Clara and Santa Cruz counties.

Resume: Richard S. Fabrikant

1998 - 2005 *Sylectics, Watsonville, California*

**FOUNDER AND PRESIDENT**

- The company is in the business of research and development of software programming tools. Funding has come from NSF grants.

1980 -Present *Op-T-Corp Inc., New Jersey*

**FOUNDER , CFO AND SECRETARY/TREASURER OF BOARD OF DIRECTORS**

- The company is in the business of portfolio management. In the early 1980's the company had designed computer based strategies for the optimization of investment portfolios that were marketed to brokerage firms.

1984 - 1998 *Anafaze Incorporated, Watsonville California.  
(Precision Electronic Process Control Instrumentation)*

**FOUNDER, EXECUTIVE VICE PRESIDENT, SECRETARY-TREASURER OF THE BOARD OF DIRECTORS**

- Anafaze is in the business of research and design, production and marketing of precision electronic process control instrumentation. The company is a world leader in multi-loop thermal controllers.
- Company was merged into Watlow Electric Manufacturing.

1986 - 1988 *Centre for Regional Economic Analysis, Tasmania, Australia*

**ECONOMIC CONSULTANT AND PROJECT DIRECTOR**

- Directed market and business surveys for the elected officials of the Hobart Intergovernmental Council, carried out economic development studies for the metropolitan regions of Hobart and Launceston, and for the Southern Tasmanian commercial VHF-FM service area.

1981 - 1984 *Raytek Inc., Santa Cruz, CA  
(Infrared Non-Contact Temperature Measurement Instrumentation)*

**VICE PRESIDENT FINANCE, SECRETARY-TREASURER OF THE BOARD OF DIRECTORS**

- Raytek is the world leader in the design, production and marketing of hand held infrared non-contact temperature measurement instrumentation.

ACADEMIC EXPERIENCE

1988 - 1995    *Cabrillo College, Aptos, CA*,  
                  INSTRUCTOR (Part Time)

1986 - 1988    *Department of Economics, University of Tasmania, Australia*  
                  TENURED LECTURER

1975 - 1981    *University of Denver, Denver, CO*  
                  ASSISTANT PROFESSOR OF ECONOMICS

1969 - 1975    *University of California, Santa Barbara, CA*  
*University of California, Riverside*  
                  LECTURER

A list of publications, professional presentations and awards will be provided on request.

**Windmill Mobile Home Park  
PW Properties Invs, LLC  
473 Hope Street, #1  
Mountain View, CA 94041**

TO: All Residents of Space \_\_\_\_\_

Re: Notice of Increase of Monthly Space Rent Under Civil Code  
Section 798.30 of the Mobilehome Residency Code

Dear Resident:

Pursuant to the City of Morgan Hill Municipal Code, Windmill Mobile Home Park is filing an application for a rent increase hearing, to increase your monthly rent \$192.55.

**You have the right to utilize the rental dispute hearing process provided for in Chapter 5.36 of the Morgan Hill municipal code.** A copy of Chapter 5.36 has been attached for your reference. Also, please note that you may contact the Morgan Hill City Clerk or the Secretary of the Morgan Hill commission on rents at (408) 779-7271, or at 17555 Peak Avenue Morgan Hill, CA 95037, for more information regarding this process.

Sincerely,

**Windmill Mobile Home Park**

Dated: October 11, 2007

By: C.W. Dean Dahl  
Owner/Authorized Agent

## **EXHIBIT "A"**

Title 5 BUSINESS LICENSES GENERALLY**Chapter 5.36 MOBILE HOME PARK RENTS\***\*Note to Chapter 5.36Article I General Provisions5.36.010 Purpose.5.36.020 Definitions.5.36.030 Exceptions to chapter provisions.5.36.035 Rollback related to reinstatement of vacancy control.5.36.036 Hearing process related to rollbacks.Article II Rental Dispute Hearing Process5.36.040 Hearing process-Established.5.36.050 Space rent increases-Review procedures.5.36.060 Space rent increases-Limit on annual increases.5.36.070 Space rent increases-Exceptions.5.36.080 Hearing process-Submission of petition by owner.5.36.090 Hearing process-Submission of petition by tenants.5.36.100 Petitions-Form.5.36.110 Petitions-Filing requirements.5.36.120 Petitions-Consolidation.5.36.130 Space rent increases-Notice.5.36.140 Space rent increase-Effective when.5.36.150 Hearing-Procedures.5.36.160 Hearing-Fee.5.36.170 Hearing-Conduct.5.36.180 Hearing-Determination.5.36.190 Hearing-Determination-Notification.5.36.200 Increase determined not reasonable-Remedies.5.36.210 Determination-Deemed final.5.36.220 Determination-Applicability.5.36.230 Specification of charges.Article III Rent Increase Standards-Fair Return5.36.250 Determination of reasonableness.

5.36.260 Rent adjustment proceedings-Terminology.

5.36.270 Presumption of base year net operating income.

5.36.280 Adjustment to income computation-Conditions.

5.36.290 Determination of base year net operating income.

5.36.300 Increases in operating expenses-Amounts permitted.

5.36.310 Allowable rent increases.

5.36.320 Limitations on annual increases.

Article IV Unlawful Acts-Penalty

5.36.330 Violation-Penalty.

Article V Miscellaneous

5.36.350 Extension of time-Service by mail.

5.36.360 Extension of time-Mutual agreement.

5.36.370 Duty of owner to provide copy of chapter.

5.36.380 Rent stabilization fees.

#### **\*Note to Chapter 5.36**

\* Prior ordinance history: Ords. 606A N.S., 692 N.S. and 756 N.S.

### **Article I General Provisions**

#### **5.36.010 Purpose.**

A. Mobile home owners, unlike apartment tenants or residents of other rental stock, are in the unique position of having made a substantial investment in a residence for which space is rented or leased. Removal and/or relocation of a mobile home from a park space is not a practical alternative to accepting an excessive rent increase in that it can only be accomplished at substantial cost, and in many instances may cause extensive damage to the mobile home and loss of appurtenances such as integrated landscaping and supporting structures inconsistent with the new location. Because mobile homes are often owned by senior citizens, persons on fixed incomes, and persons of low and moderate income, exorbitant rent increases fall upon these individuals with particular harshness.

B. The city has sponsored extensive negotiations to eliminate the need for the ordinance codified in this chapter. Only one of the city's mobile home parks achieved a mediated solution as a result of this delay. The remaining parks were unable to reach agreement after extensive negotiation; thus, necessitating the ordinance codified in this chapter.

C. Since approximately July, 1981, a heightened pattern of excessive rent increases has emerged within some of the mobile home parks in the city in disregard of the purposes and intent of the city's previous ordinances. Incorporation of these unduly excessive prior increases within the rate structure of this chapter without provisions for their review would materially defeat the purposes and intent of this chapter and the stability it seeks to bring about.

D. The city council declares that it is necessary in the public interest to establish a means by which to resolve the potentially divisive and harmful impasse between park owners and coach owners. After consideration of numerous factors, among which are the relatively small number of parks located within the city, the level of organization and communication between mobile home owners in each park, and mandates of state law, regulations which best fit the needs of the city have been selected.

E. The regulations which are set forth in this chapter are designed to produce stability in rent increases for mobile home park tenants while recognizing the rights of mobile home park owners to receive a just and reasonable

return on their property. The standards, utilizing the concept of net operating income and a 1981 base year, adopted by Sections 5.36.250 through 5.36.320 of this chapter are intended to provide the necessary adjustment mechanism to meet constitutional requirements.

F. The council finds that the adoption of the ordinance codified in this chapter will not have a significant, substantial or adverse effect on the physical environment of the community because enactment of this chapter involves no deviation from the general plan and no change in the present use of any property within the city. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.020 Definitions.**

For the purposes of this chapter, unless otherwise apparent from the context, certain words and phrases used in this chapter are defined as follows:

- A. "Capital improvements" means those improvements which materially add to the value of property, appreciably prolong its useful life, or adapt it to new uses, and which are required to be amortized over the useful life of the improvement pursuant to the straight-line depreciation provision of the Internal Revenue Code, and the regulations issued pursuant thereto.
- B. "City clerk" means the city clerk at the city of Morgan Hill or the clerk's designate.
- C. "Commission" means the Morgan Hill commission on rents.
- D. "Consumer Price Index (CPI)" means the price index for all urban consumers for the San Francisco/Oakland Bay Area (all items), provided by the U.S. Bureau of Labor Statistics.
- E. "Housing services" means and includes those services provided and associated with the use or occupancy of a mobile home space, including but not limited to repairs, insurance, maintenance, replacement, painting, light, heat, water, laundry facilities and privileges, refuse removal, parking, recreation facilities, security service and any other benefits, privileges or facilities.
- F. "Mobile home" means a structure designed for human habitation and for being moved on a street or highway, whether commonly referred to as a mobile home or as a trailer.
- G. "Mobile home owner" or "tenant" means any person owning a mobile home which is located within a mobile home park in the city.
- H. "Mobile home park" means an area of land where two or more mobile home spaces are rented, or held out for rent, or made available for use, to accommodate mobile homes used for human habitation.
- I. "Mobile home park owner" or "owner" means the owner, lessor, operator or manager of a mobile home park in the city.
- J. "Mobile home space" or "space" means a site within a mobile home park designed and available for the location and use of a mobile home for human habitation.
- K. "Net operating income" means that return to an owner as described in Article III of this chapter.
- L. "Operating expenses" means those costs to an owner as described in Article III of this chapter.
- M. "Space rent" means the consideration, including any bonus, benefits or gratuity demanded or received in connection with the use and occupancy of a mobile home space in a mobile home park, or for housing services provided, and security deposits, but exclusive of any amount paid for the use of the mobile home as a dwelling unit.
- N. "Space rent increases" means any additional rent demanded of or paid by a tenant for a mobile home space including any reduction in housing services without a corresponding reduction in the moneys demanded or paid for space rent. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.030 Exceptions to chapter provisions.**

The provisions of this chapter shall not apply to the following:

- A. Space rent or space rent increases during a thirty-day period commencing upon the completion of a new mobile home space or mobile home space first rented after July 1, 1986, where the mobile home previously occupying the space has been removed pursuant to a termination of tenancy.
- B. Nothing in this chapter shall operate to restrict the rights of tenants and owners who have entered into agreements providing for a fixed term of a period of greater than twelve months meeting the criteria of California

Civil Code Section 798.17, Subdivision (b), and/or a fixed rent for mobile home tenancies.

C. A one-time administrative fee of twenty-five dollars may be imposed for mobile home spaces where the mobile home remains, but ownership of the mobile home is transferred. The aforesaid charge is intended to provide a one-time compensation payment for administrative bookkeeping charges in connection with the ownership transfer. (Ord. 1356 N.S. § 1, 1997: Ord. 1090 N.S. § 1, 1992; Ord. 940 N.S. § 1, 1989: Ord. 856 N.S. § 1 (part), 1988)

### **5.36.035 Rollback related to reinstatement of vacancy control.**

A rollback related in space rent shall be affected as set forth below for mobile homes transferred between October 4, 1989, and the effective date of the ordinance codified in this section. This section shall only apply to space rent for spaces upon which there was a transfer of the mobile home, the mobile home remained on its space in the park, and the transfer occurred between October 4, 1989, and the effective date of the ordinance codified in this section. The space rent for spaces governed by this section collectable from and after the effective date of the ordinance codified in this section shall be established as that space rent in effect at the time of the first transfer of the mobile home after October 4, 1989, adjusted by the amount authorized by any other rent adjustments applicable under this chapter which were applied to other spaces in the mobile home park during the period October 4, 1989, through and including the effective date of the ordinance codified in this section. (Ord. 1090 N.S. § 2 (part), 1992)

### **5.36.036 Hearing process related to rollbacks.**

A. A park owner whose space is subject to the provisions of Section 5.36.035 shall be entitled to invoke the hearing process before the commission over the proposed rent rollback within forty-five days of the effective date of the ordinance codified in this section. A petition under this section may only request review of the applicability and limitations on rents adjusted pursuant to Section 5.36.035 and is intended to afford the owner an opportunity to show that the application of the rollback will create a hardship or deprive the park owner of a fair, just and reasonable return.

B. It is the intent of this section that the space rent charged for any mobile home space by a mobile home park owner shall be no greater than the space rent which would apply if Ordinance No. 940, New Series, had not been adopted. It is the express intent of the city council in adopting this ordinance to reenact, reauthorize and reestablish vacancy control as part of the mobile home rent ordinance. (Ord. 1090 N.S. § 2 (part), 1992)

## **Article II Rental Dispute Hearing Process**

### **5.36.040 Hearing process-Established.**

There is established the Morgan Hill mobile home space rental dispute hearing process ("hearing process"). (Ord. 1356 N.S. § 2, 1997: Ord. 856 N.S. § 1 (part), 1988)

### **5.36.050 Space rent increases-Review procedures.**

Except as provided in this chapter, any space rent increase after the effective date of the ordinance codified in this chapter, which exceeds an aggregate of seventy-five percent of the increase of the CPI for the twelve-month period ending sixty days before notice of such rent increase is given, or eight percent, whichever is less, shall be subject to review under the hearing process. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.060 Space rent increases-Limit on annual increases.**

The space rent of any mobile home space may not be increased more than once in any twelve-month period except as allowed under Section 5.36.030 of this chapter. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.070 Space rent increases-Exceptions.**

If an owner has not raised space rent for more than twenty-four months prior to the latest increase, rental increases in excess of seventy-five percent of the increase in CPI for the twelve-month period ending sixty days before notice of such rent increase is given shall not be subject to this chapter, provided that such increases satisfy the following criteria: If the last increase was more than twenty-four months prior to the current increase, a rental increase not to exceed that set out in Section 5.36.320 of this chapter shall be allowed. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.080 Hearing process-Submission of petition by owner.**

Any owner whose mobile home park is subject to the provisions of this chapter and who seeks to increase rent in excess of the provisions of this chapter shall be required to invoke the hearing process by a petition filed with the city clerk which shall be processed and heard in the same manner as provided in this chapter for tenant applications, provided that the owner shall notify, in writing, all tenants subject to such rental increase and shall include in his filing with the city clerk a document executed by the person who has deposited into the regular first class mail or has personally served the notice affirming the source of the notice upon the tenants, listing the names and addresses of all such tenants. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.090 Hearing process-Submission of petition by tenants.**

- A. Upon written petition of more than twenty-five percent whose spaces are subject to the terms of this chapter, the rental dispute hearing process may be invoked.
- B. In the petition the tenants shall designate an individual to serve as the tenant representative for the purposes of receipt of all notice, correspondence, decisions and finding of fact required in this chapter. Service of notice upon the designated tenant representative will constitute adequate and sufficient notice to the tenants who signed the petition. Failure to designate a tenant representative will render the petition incomplete and the petition will not be accepted for filing. (Ord. 1356 N.S. § 3, 1997: Ord. 856 N.S. § 1 (part), 1988)

### **5.36.100 Petitions-Form.**

The application for review must be filed on a petition form prescribed by the commission and must be accompanied by such supporting material as the commission shall prescribe including, but not limited to, a copy of the owner's notice of space rent increase. Allegations of service reductions shall be submitted in writing. The burden of proof regarding such service reductions shall be on the person alleging such reductions. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.110 Petitions-Filing requirements.**

Except as provided in this chapter, a petition must be filed thirty calendar days prior to the effective date of the increase stated in the notice to tenant; provided however, that a tenant shall have at least ten calendar days after receipt of notice of a space rent increase from the owner in which to file a petition. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.120 Petitions-Consolidation.**

As soon as possible after petitions have been filed with respect to mobile home park spaces which are under common ownership or management but in no event more than seventy-two hours following receipt of a petition regarding a mobile home park space rent increase, the commission shall, to the greatest extent possible, consolidate such petitions. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.130 Space rent increases-Notice.**

Whenever an owner notifies a tenant or tenants of a proposed space rent increase which is subject to review under Section 5.36.050 of this article, the owner shall also notify the tenant by the same type of notice or, at the owner's option, in the same notice in a conspicuous manner of the tenant's right to utilize the rental dispute hearing process and shall provide the following:

- A. A summary of this chapter approved by the commission;
- B. A statement that a copy of the chapter or summary was provided to the tenant; and
- C. The address and telephone number of the city clerk and secretary of the commission. (Ord. 998 N.S. § 1, 1990: Ord. 856 N.S. § 1 (part), 1988)

#### **5.36.140 Space rent increase-Effective when.**

Providing that a completed petition is timely filed, concerning a space rent increase subject to this chapter, that portion of the requested rental increase (and only that portion) which exceeds the seventy-five percent increase in CPI limitation described in this chapter, shall not take effect unless and until such time as the rent commission allows such increase or portion thereof pursuant to the provisions of this chapter. (Ord. 856 N.S. § 1 (part), 1988)

#### **5.36.150 Hearing-Procedures.**

Within ten working days from the date the petition as described in this chapter is received by the city clerk, the commission shall conduct a hearing with all parties, or within such additional time as may be mutually agreed upon by all parties to the hearing. The commission should give at least five calendar days' notice to the parties prior to the hearing. The notice period shall commence upon deposit of the notice in the regular first class mail to the parties. Materials to be considered at the hearing must be made available to both parties to the hearing at least three working days in advance of the hearing. Extensions of time for the hearing process may be mutually agreed upon by both parties with the concurrence of the chair of the commission. (Ord. 998 N.S. § 2, 1990: Ord. 856 N.S. § 1 (part), 1988)

#### **5.36.160 Hearing-Fee.**

The cost of hearings conducted under this chapter shall be paid by the city from fees collected under the provisions of Section 5.36.380. (Ord. 856 N.S. § 1 (part), 1988)

#### **5.36.170 Hearing-Conduct.**

The hearing shall be conducted by the chair of the commission or by a person selected by the commission. Any party or their counsel may appear and offer such documents, testimony, written declaration or other evidence as may be pertinent to the proceeding. A record of the proceedings shall be prepared by the commission and submitted to the city clerk who shall maintain it for a period not to exceed two years. (Ord. 998 N.S. § 3, 1990: Ord. 856 N.S. § 1 (part), 1988)

#### **5.36.180 Hearing-Determination.**

Based upon the evidence presented at the hearing, the commission shall make a determination whether or not, in light of all the evidence presented, the proposed rent increase is reasonable under the circumstances, in accordance with the standards set forth in Section 5.36.250 and following of this chapter. The burden of proof regarding such reasonableness shall be on the owner unless otherwise indicated. The standards set forth in Section 5.36.250 and following are expected to provide for a just and reasonable return to owner in all foreseeable cases. However, an owner shall be permitted to include within the petition additional facts showing that due to unique or special circumstances, the strict application of the formulas set out in Section 5.36.250 and following prevents a just and reasonable return on the owner's property to owner. If the commission concurs, then it may adopt an effective rent schedule or fix an increase thereto up to that required for a just and reasonable return to owner. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.190 Hearing-Determination-Notification.**

Within thirty working days following the conclusion of the hearing, the commission shall make a determination in writing that the proposed space rent increase is reasonable under the circumstances or not, and shall make written findings of fact upon which such determination is based. Within the thirty-working-day period, the secretary of the commission shall cause copies of the determination and the findings to be mailed by regular first class mail to the parties. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.200 Increase determined not reasonable-Remedies.**

Any rental or service charge increases which have been collected by mobile home park owners pursuant to an increase which is the subject of a petition for hearing and which is later determined by the commission to be excessive, shall, within ninety calendar days be either returned to the tenants or credited to future rental charges at the option of the mobile home park owner. In no event, shall the time period exceed ninety calendar days for carrying out the decision of the commission. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.210 Determination-Deemed final.**

The determination of the commission shall be final and shall be delivered to the parties in writing together with written findings of fact supporting such determination by depositing the same in the regular United States mail, first class mail, within thirty working days after the hearing provided in Section 5.36.150. Any party disputing the final conclusions and findings of the commission may seek review of them pursuant to Sections 1094.5 and 1094.6 of the California Code of Civil Procedure. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.220 Determination-Applicability.**

The determination made under the provisions of this chapter shall be effective with respect to all mobile home park spaces, unless the tenant of such space has a written lease of a period greater than twelve months meeting the criteria of California Civil Code Section 798.17, subdivision (b), with the park owner which otherwise sets forth the rights and obligations of the parties with respect to rent. (Ord. 1356 N.S. § 4, 1997; Ord. 856 N.S. § 1 (part), 1988)

### **5.36.230 Specification of charges.**

For any rent increase approved pursuant to proceedings conducted in compliance with the provisions of this chapter, the mobile home park owner shall, when demanding any space rent which includes such allowed amounts, specify with particularity that amount along with a citation as to the authority for that amount and a demonstration of its calculation. Any notice of termination of tenancy served by the mobile home park owner upon a mobile home park tenant on the basis of a failure to pay rent which includes such allowed charges, shall similarly show such charges and the authority for their imposition. (Ord. 856 N.S. § 1 (part), 1988)

## **Article III Rent Increase Standards-Fair Return**

### **5.36.250 Determination of reasonableness.**

The commission shall determine whether rent increases are reasonable under the circumstances taking into consideration that the purpose of this chapter is to permit owners a just and reasonable return on their property while protecting tenants from arbitrary, capricious or unreasonable rent increases. The commission's determination shall be made with reference to the standards set out in this article. (Ord. 856 N.S. § 1 (part), 1988)

### 5.36.260 Rent adjustment proceedings-Terminology.

For the purposes of space rent adjustment proceedings, the following definitions shall be used:

A. "Net operating income" equals gross income less operating expenses.

B. "Gross income" equals:

1. Gross rents, computed as gross rental income at one hundred percent paid occupancy; plus
2. Interest from rental deposits, unless directly paid by the landlord to the tenants (interest shall be computed at the rate of five and one-half percent of all deposits unless such deposits earn greater interest); plus
3. Income from laundry facilities, cleaning fees or services, garage and parking fees; plus
4. All other income or consideration received or receivable for or in connection with the use or occupancy of rental units and housing services, services, garage and parking fees;
5. Minus uncollected rents due to vacancy and bad debts to the extent that the same are beyond the owner's control. Uncollected rents in excess of three percent of gross rents shall be presumed to be unreasonable unless established otherwise. Where uncollected rents must be estimated, the average of the preceding three years experience shall be used, or some other comparable method.

C.1. "Operating expenses" shall include the following:

- a. Real property taxes;
- b. Utility costs;
- c. Management expenses (contracted or owner performed), including necessary and reasonable advertising, accounting, insurance and other managerial expenses and allowable legal expenses. Management expenses are presumed to be five percent of gross income, unless established otherwise;
- d. Normal repair and maintenance expenses, including painting, normal cleaning, fumigation, landscaping and repair of all standard services, including electrical, plumbing and sanitary sewer;
- e.i. Owner-performed labor, which shall be compensated at the following hourly rates upon documentation being provided showing the date, time and nature of the work performed:
  - (A) General maintenance at the general prevailing hourly wage as set out in the most recent "Report of The Labor Commission, U.S. Department of Labor,"
  - (B) Skilled labor at two times such rate;
- ii. Notwithstanding the above, an owner may receive greater or lesser compensation for self-labor if it can be shown that the amounts set forth above are substantially unfair in a given case. There shall be a maximum allowance under this subsection of five percent of gross income, unless the owner shows greater services for the benefit of tenants;
- f. Rehabilitation or repair work done on or in a mobile home park in order to comply with an order issued by the building department, or to repair damage resulting from fire, earthquake or other natural disaster;
- g. License and registration fees required by law to the extent the same are not otherwise paid by tenants;
- h. Capital expenses with a total cost of less than one hundred dollars per year per benefitted space, and the amortized portion of other capital expenses otherwise allowed by regulation.

2. Operating expenses shall not include:

- a. Avoidable and unnecessary expenses/increases since the base year;
- b. Mortgage principal and interest payments;
- c. Any penalties, fees or interest assessed or awarded for violation of this or any other law;
- d. Attorneys' fees and legal costs in connection with civil actions against the city;
- e. Depreciation;
- f. Any expense for which the owner has been reimbursed by any security deposit, insurance settlement, judgment for damages, settlement or any other method;
- g. Fees assessed under Section 5.36.380 of this chapter.

D. Base year for purposes of these regulations shall mean calendar year 1981.

E. Consumer Price Index is defined in subsection D of Section 5.36.020 of this chapter. (Ord. 856 N.S. § 1 (part), 1988)

### 5.36.270 Presumption of base year net operating income.

Except as provided in Section 5.36.280A of this article, it shall be presumed that the net operating income produced by a property during the base year provided a just and reasonable return on property. Owners shall be entitled to maintain and increase their net operating income from year to year in accordance with Section 5.36.310 of this article. (Ord. 856 N.S. § 1 (part), 1988)

### 5.36.280 Adjustment to income computation-Conditions.

It may be determined that the base year net operating income yielded other than a just and reasonable return on property, in which case, the base year net operating income may be adjusted accordingly. In order to make such determination, the hearing officer must make at least one of the following findings:

A. Owner's operating and maintenance expenses in the base year were unusually high or low in comparison to other years. In such instances, adjustments may be made in calculating such expenses so the base year operating expenses reflect average expenses for the property over a reasonable period of time. The commission shall consider the following factors:

1. The owner made substantial capital improvements during 1981, which were not reflected in the rent levels on the base date;
2. Substantial repairs were made due to damage caused by natural disaster or vandalism;
3. Maintenance and repair was below accepted standards so as to cause significant deterioration in the quality of housing services;
4. Other expenses were unreasonably high or low notwithstanding the following of prudent business practice. In making this determination, the fact that property taxes prior to 1981 may have been higher than in the base year shall not be considered.

B. The rent on the base date was disproportionate due to one of the enumerated factors below. In such instances, adjustments may be made in calculating gross rents consistent with the purposes of this chapter:

1. The rent on the base date was established by a lease or other formal rental agreement which provided for substantially higher rent at other periods during the term of the lease;
2. The rent on the base date was substantially higher or lower than at other times of the year by reason of seasonal demand or seasonal variations in rent;
3. The rent on the base date was substantially higher or lower than preceding months by reason of premiums being charged or rebates being given for reasons unique to particular spaces or limited to the period determining the base rent.

C. It shall be presumed that where net operating income is less than fifty percent of gross income in the base year, after making adjustments as permitted by subsections A and B of this section, the owner was receiving less than a just and reasonable return on property. In such a case, for purposes of determining base year net operating income, gross income shall be adjusted upward to twice the amount of adjusted base year operating expenses. (Ord. 856 N.S. § 1 (part), 1988)

### 5.36.290 Determination of base year net operating income.

A. To determine the net operating income during the base year, there shall be deducted from the annualized gross income being realized on January 1, 1982, a sum equal to the actual operating expenses for calendar year 1981, unless the owner demonstrates to the satisfaction of the commission that some other twelve consecutive month period is justified by reasons independent of the purpose of this article. In all cases, January 1, 1982, shall fall within the twelve-month period utilized in this chapter, except as provided in subsection B of this section.

B. In the event that the owner did not own the subject property on January 1, 1982, the operating expenses for 1981 shall be determined in one of the following manners, whichever the commission determines to be more reliable in the particular case:

1. The previous owner's actual operating expenses as defined in subsection C of Section 5.36.260 of this article or, where unavailable;
2. Actual operating expenses for the first calendar year of ownership, discounted to 1981 by the schedule in Section 5.36.300 of this article.

C. In the event that a petition for rent increase involves less than fifty percent of the spaces in a mobile home park, the net operating income for the base year shall be determined only for the spaces affected by the petition. The net operating income for these spaces will be determined under the procedure outlined in Section 5.36.260. Should specific documentation not be available on individual spaces for the base year, the commission shall make a reasonable determination of the net operating income. (Ord. 998 N.S. § 4, 1990: Ord. 856 N.S. § 1 (part), 1988)

#### **5.36.300 Increases in operating expenses-Amounts permitted.**

Where scheduling of rent increase, or other calculations require projections of income and expenses, it shall be assumed that operating expenses, exclusive of property taxes and management expenses, increase at ten percent per year, that property taxes increase at two percent per year, and that management expenses are five percent of gross income. (Ord. 856 N.S. § 1 (part), 1988)

#### **5.36.310 Allowable rent increases.**

A. Upon filing of a petition by an owner, rent increases may be permitted such that the owner's net operating income will be increased at the rate of forty percent of the increase in the CPI over the base year. The increase in the CPI shall be calculated by dividing the most recently reported monthly figure at the time of filing of the petition by the monthly figure for February 1981 = (2/81 CPI = 260.5).

B. In the event that a petition by an owner involves less than fifty percent of the spaces in a mobile home park, rent increases may be permitted such that the owner's net operating income on the affected spaces will be increased at the rate of forty percent of the CPI over the base year. (Ord. 998 N.S. § 5, 1990: Ord. 856 N.S. § 1 (part), 1988)

#### **5.36.320 Limitations on annual increases.**

Notwithstanding any other provision of this chapter, no upward rent adjustment may be authorized for any given year in an amount in excess of twice the San Francisco/Oakland Bay Area Consumer Price Index (CPI) or fifteen percent, whichever is less. The applicable figure for the CPI shall be the figure for the twelve month period ending sixty days before the notice of rent space was given. If the amount of any individual adjustment otherwise justified under this article is greater than such limit, the full justified amount shall be granted over a period of years such that the rent does not increase by greater than the limit in any given year. (Ord. 998 N.S. § 6, 1990: Ord. 856 N.S. § 1 (part), 1988)

### **Article IV Unlawful Acts-Penalty**

#### **5.36.330 Violation-Penalty.**

No person shall demand, accept, receive or retain any rent in excess of the amounts allowed under this chapter. Any person may file a complaint regarding an alleged violation of this chapter with the city clerk. The city attorney is authorized to, in his discretion, investigate and prosecute those complaints that in his determination merit prosecution. Any person found to have demanded, accepted, received or retained any rent in excess of the amounts allowed under this chapter is guilty of an infraction. Unless otherwise stated, the penalty to be imposed upon conviction shall be (1) a fine not exceeding one hundred dollars for a first conviction; (2) a fine not exceeding two hundred dollars for a second violation of the same ordinance within one year; (3) a fine not exceeding five hundred dollars for each additional violation of the same ordinance within one year. For this purpose, a bail forfeiture shall be deemed to be a conviction of the offense charged. (Ord. 856 N.S. § 1 (part), 1988)

### **Article V Miscellaneous**

#### **5.36.350 Extension of time-Service by mail.**

Whenever any notice or determination called for by this chapter is served by mail, the time for compliance set out in this chapter shall be extended one calendar working day. Further when the last day for compliance falls upon a legal holiday, the time for compliance is extended to the next working day. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.360 Extension of time-Mutual agreement.**

By written agreement of the parties or upon application to the commission and for good cause shown, the time frames provided for under this chapter may be extended. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.370 Duty of owner to provide copy of chapter.**

It shall be the duty of every owner to provide a summary copy of this chapter to each tenant who rents or leases a space from the owner. This summary copy will be composed by the city attorney and available through the city clerk. A single summary copy will be provided each owner by the city for reproduction by the owner. (Ord. 856 N.S. § 1 (part), 1988)

### **5.36.380 Rent stabilization fees.**

The costs of operation of this chapter shall be paid from fees assessed annually by the city upon park owners. Such fees shall be set by resolution which shall be reviewed annually. Such fees shall be assessed on each mobile home space other than those exempted under the provisions of subsection C of Section 5.36.030. The fees shall be assessed on October 1st of each year, for all spaces not exempted from the chapter as of September 30th of the same calendar year. No more than one-half of the per space charge may be collected by the park owner from the tenant of the space for which the fee is paid. Any park owner who has not paid the assessed rent stabilization fees within ninety calendar days of the receipt of the notice of a fee assessment shall be subject to a penalty in the form of a fine equal to five percent of the total assessment. Notice of the potential for a fine shall be included in the original notice of fee assessment. Fines may not be collected by the park owner from the tenant of the space for which the fee is paid. Any park owner who has not paid the rent stabilization fee within one hundred twenty calendar days of the notice of fee assessment shall be found to be in violation of the ordinance and subject to the penalties of Section 5.36.330. (Ord. 1356 N.S. § 5, 1997; Ord. 856 N.S. § 1 (part), 1988)

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**PROOF OF SERVICE**  
WINDMILL MOBILE HOME PARK  
PW PROPERTIES INVS., LLC

STATE OF CALIFORNIA, COUNTY OF ORANGE

I am employed in the County of Orange, State of California. I am over the age of 18 years and am not a party to the within action. My business address is 200 East Sandpointe, Fourth Floor, Santa Ana, California 92707-0507. On October 12, 2007, I caused the foregoing documents(s) described as **NOTICE OF INCREASE OF MONTHLY SPACE RENT UNDER CIVIL CODE SECTION 798.30 OF THE MOBILEHOME RESIDENCY CODE** to be served on the interested parties in this action as follows:

by placing  the original  a true copy thereof enclosed in sealed envelopes addressed as listed on the attached page.

**BY MAIL:** I am "readily familiar" with the firm's practice of collection and processing correspondence for mailing. Under that practice it would be deposited with the U.S. Postal Service on that same day with postage thereon fully prepaid Santa Ana, California in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if the postal cancellation date or postage meter date is more than one day after date of deposit for mailing in the affidavit.

**BY FACSIMILE:** I caused such document(s) to be transmitted by facsimile transmission from a facsimile transmission machine, at Santa Ana, California, with the telephone number, (714) 546-7457 to the parties and/or attorney for the parties at the facsimile transmission number(s) shown above. The facsimile transmission was reported as complete without error by a transmission report, issued by the facsimile transmission machine upon which the transmission was made. A true and correct copy of the transmission report is attached hereto and incorporated herein by reference.

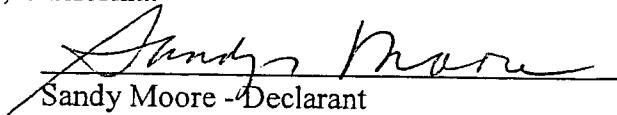
**BY OVERNITE COURIER:** I caused such envelope to be placed for collection and delivery on this date in accordance with standard OVERNITE EXPRESS delivery procedures.

**BY EMAIL:** I caused the document (without enclosures) described above, to be sent via email in PDF format to the above-referenced person(s).

**BY PERSONAL SERVICE:** I caused such envelope to be delivered by hand to the above-referenced person(s).

[State] I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on October 12, 2007, at Santa Ana, California.

  
Sandy Moore -Declarant

**SERVICE LIST**  
**WINDMILL MOBILE HOME PARK**  
**PW PROPERTIES INVS., LLC**

Andy and Lucy Steffensen Windmill Mobile Home Park 575 San Pedro Avenue, Space 2 Morgan Hill, CA 95037	Mark and Linda Bristol Windmill Mobile Home Park 575 San Pedro Avenue, Space 3 Morgan Hill, CA 95037
Margaret Miller Windmill Mobile Home Park 575 San Pedro Avenue, Space 7 Morgan Hill, CA 95037	Mildred Barker Windmill Mobile Home Park 575 San Pedro Avenue, Space 12 Morgan Hill, CA 95037
Mary and Paul Sobeck Windmill Mobile Home Park 575 San Pedro Avenue, Space 13 Morgan Hill, CA 95037	Shawn & Rochelle Elmbrook Windmill Mobile Home Park 575 San Pedro Avenue, Space 15 Morgan Hill, CA 95037
Teresa Qualtieri Windmill Mobile Home Park 575 San Pedro Avenue, Space 17 Morgan Hill, CA 95037	M. Richardson Windmill Mobile Home Park 575 San Pedro Avenue, Space 20 Morgan Hill, CA 95037
Harry Brown Windmill Mobile Home Park 575 San Pedro Avenue, Space 24 Morgan Hill, CA 95037	Dallas Schultz Windmill Mobile Home Park 575 San Pedro Avenue, Space 25 Morgan Hill, CA 95037
Richard and Sheil Howe Windmill Mobile Home Park 575 San Pedro Avenue, Space 32 Morgan Hill, CA 95037	Graciela Pinot Windmill Mobile Home Park 575 San Pedro Avenue, Space 33 Morgan Hill, CA 95037
Edith Caro & Oscar Lara Windmill Mobile Home Park 575 San Pedro Avenue, Space 38 Morgan Hill, CA 95037	Lucille Hudson Windmill Mobile Home Park 575 San Pedro Avenue, Space 40 Morgan Hill, CA 95037
Joseph Szep Windmill Mobile Home Park 575 San Pedro Avenue, Space 46 Morgan Hill, CA 95037	Deborah Bastle Windmill Mobile Home Park 575 San Pedro Avenue, Space 48 Morgan Hill, CA 95037

Marina Briscoe Windmill Mobile Home Park 575 San Pedro Avenue, Space 50 Morgan Hill, CA 95037	Marge Struzenberg Windmill Mobile Home Park 575 San Pedro Avenue, Space 53 Morgan Hill, CA 95037
Bob & Julie Wade Windmill Mobile Home Park 575 San Pedro Avenue, Space 54 Morgan Hill, CA 95037	Diana Bordi Windmill Mobile Home Park 575 San Pedro Avenue, Space 56 Morgan Hill, CA 95037
Eva Mancera Windmill Mobile Home Park 575 San Pedro Avenue, Space 57 Morgan Hill, CA 95037	Mae Casino Windmill Mobile Home Park 575 San Pedro Avenue, Space 61 Morgan Hill, CA 95037
Kevin M. Spence Windmill Mobile Home Park 575 San Pedro Avenue, Space 63 Morgan Hill, CA 95037	Erika Merida Windmill Mobile Home Park 575 San Pedro Avenue, Space 68 Morgan Hill, CA 95037
Joan Mathers Windmill Mobile Home Park 575 San Pedro Avenue, Space 70 Morgan Hill, CA 95037	Joann Baker Windmill Mobile Home Park 575 San Pedro Avenue, Space 75 Morgan Hill, CA 95037
Emily Baver Windmill Mobile Home Park 575 San Pedro Avenue, Space 78 Morgan Hill, CA 95037	Mary Armstrong Windmill Mobile Home Park 575 San Pedro Avenue, Space 80 Morgan Hill, CA 95037
Ronald P. Sergi Windmill Mobile Home Park 575 San Pedro Avenue, Space 89 Morgan Hill, CA 95037	Larry & Leilani Morley Windmill Mobile Home Park 575 San Pedro Avenue, Space 90 Morgan Hill, CA 95037