Chapter II. Literature Review

2.1 Conservation Easements: a definition

The conservation easement is an important method of protection of productive farmland, wetlands, scenic areas, and open space in the United States. A conservation easement is a restriction placed on land use recorded in the deed of a land parcel. Land may be owned in several capacities. Fee simple ownership yields the landowner all of the rights available on the land parcel. While it is the most “complete” form of ownership, holding land in fee simple does not allow the owner to use the land in any way they may desire. For instance, no landowner is permitted to grow poppies for opium production or harvest marijuana on their property. In order to protect society from harm, these uses are prohibited for all landowners. Other examples of use-right restrictions are zoning laws, which allow local government to guide specific uses, and eminent domain laws, which allow the government to use all or part of a land parcel for public purposes with compensation.

The “bundle of sticks” metaphor used by land economists is useful in explaining the conservation easement concept. A piece of land can be compared to a bundle of sticks. Each stick in the bundle represents a particular use-right, partial interest, or access right of the property. A landowner that owns a land parcel in fee simple is vested with all applicable use-rights to treat land as a fully marketable commodity. Any of these rights may be separated and legally conveyed in the marketplace. Water, mineral, and timber rights are examples of commonly transferred interests. The right to mine a land parcel for its mineral resources can be sold while ownership of the land parcel remains with the landowner. This type of use-right transfer could be termed an ‘affirmative easement’.

Property use-rights may also be taken away from the land parcel and be ‘extinguished’. These ‘negative easements’ restrict the use of a land parcel. As stated above, a conservation easement is a recorded deed restriction prohibiting certain use-rights of a land parcel. A landholder can “take a stick from the bundle” by placing a conservation easement on their real property.
Environmental protection using easements contrasts with the historic use and interpretation of an easement. Historically, an easement was written into a deed to allow another party access to a use-right of a land parcel. Easements were used to grant use-rights rather than restrict them. For instance, access to a stream by crossing another landowner’s property, or use of a private road or right-of-way which crosses one landowner’s property in order to get to another landowner’s property.

In the realm of conservation easements, use-rights are taken away from the landowner. The specific use-rights to be prohibited on a land parcel are specified by the organization and the landholder. For the purpose of this thesis, because it is often a stipulation of a conservation easement, the restriction prohibits subdivision of the parcel. Often, a certain number of buildings or dwellings, which may be built on the property in the future, is specified in the easement.

In order to impart this concept of a landowner relinquishing certain rights to the use of their land parcel consider the following analogy:

“Say I own a car. I keep the car (with the ignition key), but give a neighbor my only key to the trunk. I have relinquished my ability to carry luggage in the trunk, but I have not given that ability to my neighbor. No one has that ability, since it requires both the car and the key to the trunk. What my neighbor has acquired is the ability to prevent me from carrying luggage in the trunk. What I retain is the car and the ability to drive the car and carry passengers.”1

Figure 1 is a graphical representation of the economic value held in the development rights of a land parcel. The development value of the land parcel has been termed it’s “highest and best use”.2 A component of this development land value is the

---

1 Ibid, Weibe. 1996
2 Barlowe, R. 1986
value of the land parcel in undeveloped use. Figure 1 illustrates the difference in economic valuation of the two uses, and the resultant value of an easement.
Figure 2.1

Graphical representation of development right/easement value. Both Developed land value and Undeveloped land value appreciate over time. The development right value is equal to the developed land value minus the undeveloped land value.
Environmental protection is the principle application of restrictive or conservation easements. However, the pollution constituted by agricultural use is normally not limited in any way. The conservation easement is donated by a landowner to a unit of government or an IRS-recognized, non-profit conservation organization for the purpose of protecting significant open space, recreation, ecological, agricultural, or historic resources. Most easements are granted in perpetuity, although term agreements exist. Land use restrictions are negotiated between the property owner and easement receiver based on an analysis of the property and on careful consideration of the landowner’s needs. Granting a conservation easement deed results in a legal division of ownership.

### 2.2 The Donation Procedure

The completion of a donated conservation easement involves ten basic steps. Steps in the conservation easement process:

1. Initial meeting with landowner
2. Landowner consults advisers
3. Title information
4. Baseline study and qualification
5. Negotiate easement restrictions
6. Easement appraisal ~ tax benefits
7. Notify local planning board
8. Easement finalized
9. Easement deed filed
10. Stewardship ~ monitoring and enforcement

While these steps are presented in a logical order, events could dictate a different sequence. First, the landowner and personnel from the trust or agency tour the property. This meeting clarifies the potential qualifications of the land for easement protection and the willingness of the landowner to proceed with an easement donation. Second, the

---

Wright, J.P. 1993, page 487
Brenneman, Russell, 1967. Private Approaches to the Preservation of Open Land
landowner should discuss options with personal legal and financial advisers. All such expenses are fully tax deductible should the easement be conveyed. Third, the landowner must acquire an up-to-date title report. If the entire parcel will not carry an easement, a survey must be completed to divide the restricted and unrestricted tracts. If the property is subject to an existing mortgage, a mortgage subordination agreement must be arranged. A subordination agreement is a legal contract with the mortgage carrier assuring that in the event of a foreclosure the easement will adhered to.

A parcel of land must qualify through one of four qualification categories in order that the donor can claim federal income tax deductions from the easement gift. The four conservation purposes are explained in detail in IRS §170(h)(4)(A)7 and include land preserved for recreation, ecological, open space, and historic purposes. The land must provide “significant public benefit” as described in the Tax Treatment Extension Act of 1980 (P.L. 96-541).8 However, public access to the land parcel is normally not required. A baseline study of the property should be made and might include the creation of soil and vegetation maps, wildlife observations, inventories of existing structures and improvements, and the establishment of permanent, easily relocated photo points. The baseline report is useful in future monitoring of the land under easement.9

The specific details of the easement are determined by the landholder and approved by the organization to which the easement is donated. These stipulations include current or similar land use such as agricultural or other open space use. Often the landowner retains the right to build additional buildings or houses near the existing dwelling. Exclusions to the easement such as these must be clearly stated in the restriction agreement. An independent certified appraiser is hired to appraise the easement. The exact tax income and estate implications will be derived from this result. This thesis discusses these tax benefits in Chapter 2 Section 5. The local planning board should be notified of the easement arrangement. While easements are free market

---

5 Ibid, Wright. 1993  
6 Ibid, Small. 1989  
7 Internal Revenue Service. 1992.  
8 Diehl and Barrett. 1988
transactions, and therefore government approval is not required, local planning goals should be considered. The final conservation easement deed is then prepared and filed at the local land recorder office.

After the amended deed is recorded, disregarding the stipulations of the easement would be unlawful. Yet enforcing the easement is problematic. Donating the easement establishes the obligation of enforcing the easement to an organization.

2.3 Land Preservation Advocacy Groups

Several groups advocating the protection of open space and farmland have disseminated a large amount of literature in the goal of land protection. Nonprofit conservation organizations known as land trusts have been established to protect land with scenic, historic and environmentally sensitive characteristics.

Land trusts are a very prolific publishing entity concerning conservation easements. In order to establish the most beneficial goal of conservation easement research, a wide survey of land trust publishings was conducted. The land trust is a quickly expanding facet of current conservation policy, evidenced by the wide proliferation of land trust organizations in the last decade. There are currently more than 1,100 land trusts in America and 1 new land trust is formed weekly.10 These land trust organizations are non-profit, local, grassroots conservation groups that work with landholders to preserve open space in their community. Their efforts have led to the protection of roughly 4.7 million acres of land in the United States.11 As local groups, they have greater knowledge and influence in local decisions and policies than federal governmental agencies.12

The specific and local nature of the land trusts is very useful in helping the landowner plan their estate in the most profitable way. The literature published by land

---

9 Ibid, Wright. 1993
11 [http://www.lta.org/whatlt.html](http://www.lta.org/whatlt.html) consulted 2/14/99
12 Ibid, Zinn. 1999
trusts is generally of an informative nature. Their non-profit status directs their objectives to helping the landholder and benefiting society in general. These trusts are an important source of information concerning current tax legislation on both a state and federal level, as well as providing the staff to work in the field facilitating conservation easement donations.

In surveying the abundance of land trust organization literature one will find a large array of pamphlets and information brochures with similar themes. Most describe in depth a definition of a land trust, the process of donation of development rights, and the environmental benefits of doing so. While over a thousand such organizations exist, there are several ‘umbrella organizations’ which represent local land trusts on a national level. Two such groups are the Land Trust Alliance and the American Farmland Trust. These groups publish instructional books helping land trusts better facilitate landowners. The national organizations have also produced large amounts of literature directly addressing landholders on the merits of conservation easement donation.

In the survey of this land trust literature, one can conclude that the dominant paradigm supporting the use of conservation easements is largely altruistic, without economic impetus. This literature emphasizes the fact that many landowners derive happiness and utility from maintaining family land in less developed uses.

The development rights associated with a land parcel often represent a large percentage of a landowner’s net worth, causing an economically motivated landowner to sell their property to development interests. Because the tax benefits can rarely completely financially compensate a donating landowner, the land trust movement has relied upon altruistic and philanthropic inclinations to inspire landowners to donate the development rights of their property. Relying on this motivation, the donating landowner must derive more satisfaction from preserving the land in open space than from the economic return of selling the land to development.
2.4 Previous studies of the economics of conservation easement donation

Stephen J. Small has authored insightful and comprehensive literature on the subject of tax benefits from conservation easement donation. In 1985 he wrote the federal tax law on conservation easements while working for the Internal Revenue Service.\textsuperscript{13} He then self-published a 47-page book called \textit{Preserving Family Lands}. In this text Small delves into many economic scenarios of donating development rights. He presents many options on donation variations and their economic outcomes concerning tax savings. Small pioneered the work in the analysis of tax benefits derived from donating development rights.

His 10-year-old text is still considered “the bible of conservation easements” and is distributed in many land trusts’ information packets. \textit{Preserving Family Lands} is, as described by the author, a “simple, easy-to-read, basic” piece of literature concisely describing conservation easements. Through numerous scenarios he illustrates the tax benefits of performing an easement.

The contribution Small continues to make to this study of the economics of open space preservation is seminal. Yet no one has ever posited the outcome investing the tax benefits would have on the final outcome of estate values. Although investing these tax benefits may seem intuitive to many, this omission detracts from the total picture of possible benefits derived from a conservation easement. Small leaves the reader at total income tax saved as total benefit of the easement. This figure is always far less than investment potential, leaving an economically motivated landholder to sell the land to development interests.

2.5 Implications of Conservation Easements on Income and Estate Taxation

The donation of a qualified perpetual conservation easement to a qualified receiver, such as a local government or land trust, is considered a tax-deductible

\textsuperscript{13}Federal Tax Law of Conservation Easements, Small
charitable conveyance under federal law (IRS codes).\textsuperscript{14} Easements granted for a limited time are not tax deductible. The amount of tax benefit is determined by comparing the appraised value of the land before and after the easement donation. The difference equals the value of the gift.

A landowner may deduct the full fair market value of a perpetually conveyed conservation easement. The deduction in any tax year cannot exceed 30 percent of the taxpayer’s adjusted gross income. Corporations are limited to deductions of 5 percent of their taxable income per year. If the value of the gift exceeds these limits, the excess may be carried forward for up to 5 additional years.\textsuperscript{15}

The Taxpayer Relief Act of 1997 added a provision that allows an estate to exclude up to 40\% of the value of the interest retained in land from which a conservation easement has been donated to a government unit or an organization that qualifies for tax deductible contributions under I.R.C. §501(c)(3). To qualify for the exclusion, the landowner must donate the conservation easement during their life. However, the exclusion applies to the interest retained in the property at the time of death.

As an example, a land parcel which has development value of $300,000 reduced through a conservation easement to it’s undeveloped land value of $100,000 only $60,000 is subject to estate taxation. This shelter from tax liability is subject to the stipulation that the easement decreases the value of the land by at least 30\%. If this threshold is not met, the value of the 40\% exclusion is reduced by 2 percentage points for each one percent by which the easement falls short of the 30\% requirement. In this hypothetical case, the easement did reduce the land value by more that 30\%. Therefore, at the time of estate transfer, only $60,000 of land value will be taxed: instead of $300,000.

To qualify for the exclusion, the property must be located within 25 miles of a metropolitan area as defined by the Office of Management and Budget. Other locations

\textsuperscript{14} Ibid, Small. 1989
\textsuperscript{15} Ibid, Small. 1989
that qualify are those within 25 miles of a national park or wilderness area designed as part of the National Wilderness System or within 10 miles of an Urban National Forest.\textsuperscript{16}

An important point to restate is that the estate, after the easement procedure and investment method describe here, is relatively more liquid, rather than being tied up in non-accessible land value. Thus, the estate tax can be paid by cashing in stock, insurance policies, or whatever form of investment was undertaken. The siblings who do not stay on the farm can also be bought out of estate shares with this liquid fund. This is a major point of contention in estate transfer, because often, one of the heirs wishes to stay on the land. Without proper estate planing, this can only be done by impeding the economic benefits of the other heirs. By having a liquid estate, this is not the case. Furthermore, the family can still hold the land in undeveloped use.

\subsection*{2.6 Deriving the Investment Potential}

This discussion concerning investment returns is intended to be applicable to landowners wishing to donate their land development rights and invest the tax benefits. This set of investors will have unique investment concerns and goals, different from those of the general investing population. The goal of this investment discourse is to provide foundation for the rates of return used in this thesis. The case scenario simulations detailed in this thesis use a 10\% rate of return on the invested tax benefits. This chapter will provide rationale for using this rate as a reasonable expectation for the target group of investors.

\begin{quote}
\textit{When sensible investment strategies are compared with one another, risk and expected return tend to go together.}\textsuperscript{17}
\end{quote}

The quote above is an important principle of investment theory. Most people are aware that as an investment’s expected rate of return increases, so does the potential for risk of investment loss. We could say that risk and rate of return tend to be directly

\begin{flushright}
\textsuperscript{16} US Tax Code Form 706, Schedule U
\textsuperscript{17} Sharpe, William. 1985 page 10
\end{flushright}
related and proportional. This is a characteristic of an ‘efficient market’ for the exchange of stocks and bonds.\textsuperscript{18}

There are several assumptions of the neo-classical market model that make this risk/return relationship hold true. The Capital Asset Pricing Model (CAPM) developed in the mid-1960’s provides a basis for the relationship between risk and rate of return. To focus on risk and return the CAPM reduces the investment situation to a very extreme case through various assumptions. First, all participants in the market have perfect and complete information. No investor has an advantage of additional information or knowledge in this model. Second, all investors are assumed to be concerned only with risk and return. Last, all costs involved in investment transactions are assumed to be zero. If all participants in the stock market see a high yield investment with low risk they will purchase the stock, driving the price of the investment up until the expected return is driven down. The market, with perfect information and these other listed assumptions, demands that risk and rate of return be necessarily related.\textsuperscript{19} The relationship between risk and return as they relate to different types of investments is graphically illustrated in Figure 2.

\textsuperscript{18} Ibid, Sharpe. 1985 p. 11
\textsuperscript{19} Ibid, Sharpe. 1985 p. 149.
Figure 2.2
Investment Risk and Yield Relationship.

Source: Garman and Forgue Page 517
The risk associated with a particular investment is a function of the uncertainty of return. Uncertainty results from different sources, depending on the investment. For example, government bonds are a relatively safe investment exhibiting low risk. A government bond is essentially a loan given to a government organization and risk of the government defaulting on a loan is low, however the situation did occur in California in 1998. Orange County California declared insolvency and defaulted on it’s loans, thereby causing investors holding Orange County bonds to lose their investment. This case is rare in the United States and government bonds are deemed relatively safe from loss of principle risk.\textsuperscript{20} Government bonds are much more susceptible to inflation risk. This type of risk is discussed later in this chapter.

‘Investing’ money in a federally insured savings account is a virtually no-risk situation, since the government guarantees both the principle and the yield.\textsuperscript{21} Buying stock in a corporation is riskier because there is no one guaranteeing the future success of the corporation. Investments of this nature are subject to ‘loss of principle risk’. Investing in a startup, small company could yield a 30\% return, or go bankrupt leaving the investor without yield or principle.

Risk is the extent to which an investment is subject to uncertainty. Risk may be measured by standard deviation. Risk is the uncertainty that the yield on an investment will deviate from what is expected. Figure 3 illustrates the historic standard deviation several different investment types have experienced over the last 80 years. Standard deviation is a measure of the extent to which observations in a series differ from the arithmetic mean of the series. Figure 3 uses the historic standard deviation of an investment, annualized monthly and averaged over each decade since 1920, to illustrate how much risk accompanies different investments. From Figure 3 we see that Treasury Bills experience very little deviation from their median return. The return on a T-bill is generally known, therefore uncertainty and risk are near zero.

\textsuperscript{20} White, Alex. 1995
\textsuperscript{21} Ibid, White. 1995
Annual Rates of Return

Source: Ibbotson and Associates Page 436
The volatility of small and large company stocks is much greater. These investment types exhibit larger fluctuations over time. It is important to realize that the deviations might not always be negative. The deviation could be in the investor’s favor.

There are several investment options, or portfolios, an investor can choose from in order to find their optimal balance between risk and expected rate of return. Figure 4 illustrates the rates of return of 6 investment types since 1921. The six investment types: large company stocks, small company stocks, long term corporate bonds, long term government bonds, intermediate term government bonds, and United States government treasury bills, are averaged annually throughout the decade and compared to the decade’s currency inflation.
Changes in the Risk of Assets Over Time

Source: Ibbotson and Associates
From Figure 4 we see that the annual rates of return are consistently lower for United States Treasury Bills than any of the other investment options. Supporting the CAPM, this low rate of return is accompanied with very low risk. U.S. T-bills are considered one of the safest investment options in the world. The T-bill is guaranteed with the “full faith and credit of the U.S. government.”22 The return T-bills receive has been termed the “real riskless rate of return” and serves as a benchmark from which to compare other investment opportunities.23

Figure 5 illustrates the historic return from T-bills over the last 27 years. From the linear trendline drawn through the data graph, we can see that the trend of T-bill rate of return has decreased since 1971 from 8% to less than 6% in 1998. As described above, the loss of principle risk of T-bills is very low, the risk an investor takes in placing their funds in T-bills is known as inflation risk.24 During inflationary times, there is a risk that the general price level will rise faster than the value of the T-bill investment. From Figure 4, we can see that inflation did in fact out-pace T-bill returns in the 1940’s, ’50’s and ’70’s.

_________________________
22 Ibid, Sharpe 1985 p. 185
23 Garman and Forgue. 1991 Page 545, Ibbotson
24 Ibid, Garman. 1991
US Treasury Bills
Real Riskless Rate of Return

Source: Ibbotson and Associates

Page 623
Trendline added
The return yielded from large company stocks since 1971 shown in Figure 6. From this graph we see that investments in large company stocks over the last three decades has trended upward to a yield of over 20% in the late ‘90’s. While it is unusual for large company stocks to outperform small company stocks, this has been the case for the last two decades. Figure 7 illustrates the return from small company stocks. Here we see that while returns have trended slightly downward, the average yield remains above 15%.
Figure 2.6

Large Company Stocks
1971-1998

Source: Ibbotson and Associates

Page 623
Figure 2.7

Small Company Stocks
1971-1998

Source: Ibbotson and Associates

Page 623
An investor can construct an investment portfolio made up of various investment types. This process, known as diversification, reduces risk by spreading investment monies among several different investment opportunities. Diversification reduces the random risk that any one investment will go down in value because of chance. If an investor invests in only one stock, its value might rise or fall, but if they invest in two stocks, the odds are lessened that both will fall. Research suggests that random risk can be eliminated by holding 15 or more investment types, and it can be cut in half by diversifying into as few as 5 investment types.25

Diversification should be included in any investment portfolio, and especially for the group of investors targeted by this thesis. A moderate risk investment portfolio held over a long term could safely yield a 10% return. This 10% return on capital investment can be compared to the return on agrarian and open space land of 3%.26

26 USDA 1997 census data