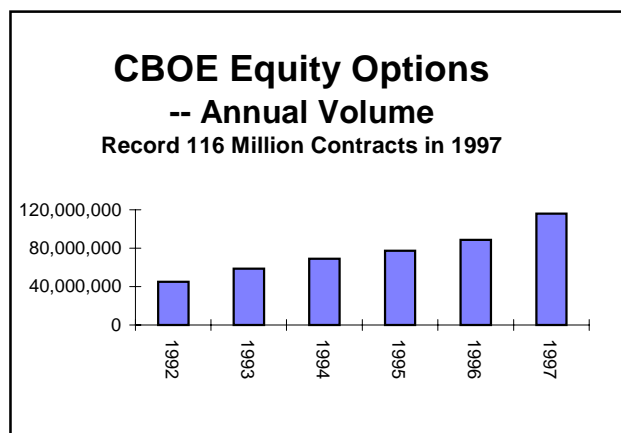


Individual Retirement Accounts and Keogh Plans: Portfolio Management Strategies Using Listed Options

Introduction

Investors can and do use strategies involving listed stock options in order to manage funds for retirement in tax-deferred vehicles. This paper describes some of the potential strategies for Individual Retirement Accounts (“IRAs”) and “Keogh Plans”¹ as well as associated legal and accounting issues.

The equity options business has seen tremendous growth in recent years, growth that attests to the increasing popularity of options for individual investors and institutional investors. For years, institutional investors have bought and sold equity and index options at The Chicago Board Options Exchange (“CBOE”). In fact, according to a 1997 survey,² 128 major pension fund money managers reported using options as part of their overall management strategy. These managers and others have discovered that options may provide investment and risk management alternatives for the many types of portfolios they manage. Individuals who manage their own portfolios may find that options provide them with the same investment alternatives.

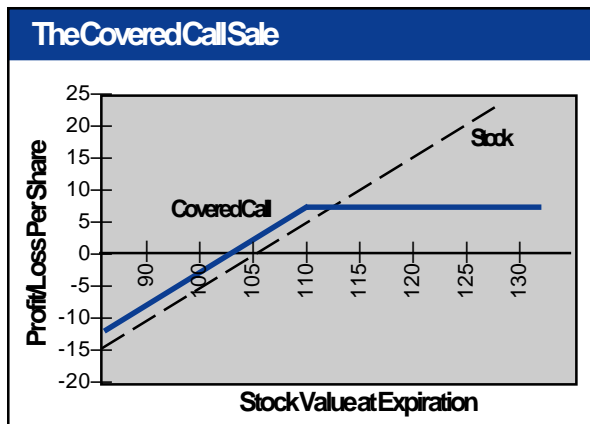


Options are contracts that give the buyer the right, but not the obligation, to buy or sell an underlying instrument, such as XYZ common stock or the Dow Jones Industrial AverageSM at a specified price (the strike) for a certain, fixed period of time. Option contracts transfer equity market risk from the buyer to the seller. The option buyer pays a price or “premium”,³ for the right to benefit should change in the value of the underlying be in their favor. By buying an option

¹ The term “Keogh Plan” applies to any qualified retirement plan that covers self-employed individuals. At one time, there were substantial differences between these plans and plans sponsored by corporate employers, but these distinctions are now largely gone. The term “Keogh” takes its name from the Congressman who sponsored legislation in 1962 to permit the self-employed to maintain qualified retirement plans.

² *Pensions & Investments* (May 12, 1997), p. 27.

³ “Premium” is the price of an option contract, determined in the competitive marketplace, which the option buyer pays to the seller for the rights conveyed by the option contract.



contract, the buyer limits the risk of loss to the premium paid. The seller of an option grants that right to the buyer and accepts the risk of an adverse change in market value of the underlying in return for the premium paid by the buyer.

Portfolio Management Strategies

The examples in this paper are based on hypothetical situations and should only be considered as examples of potential strategies. They illustrate just a few strategies that may be useful in the management of retirement accounts. **For the sake of simplicity, taxes, commissions and other transactions costs, and tracking error (pertaining to index options)⁴ have been omitted from the examples that follow.**

A. The Covered Call Sale

Selling call options against stock holdings, often referred to as “covered call writing”, is a common strategy among investors managing retirement accounts, either for themselves or for others. This strategy outperforms outright stock ownership in stable markets and reduces stock price risk by the premium received.

Assume, for example, that an investor buys 100 shares of company XYZ stock at 105-1/4. In addition, the investor sells one 2-month 110-strike XYZ call option at 3-1/8. By selling this option, the investor assumes the obligation of selling 100 shares of XYZ stock at the

price of 110, at any time up until the expiration of the option (in 2 months). In this case, the sale of the call is deemed “covered” because the investor owns the underlying shares of stock.

Consider how this strategy works by analyzing potential profits or losses at expiration. If XYZ remains below 110, it is likely that the call buyer will choose not to “exercise”⁵ the option. In this case, the covered call seller will retain XYZ stock, as well as the option premium. The premium provides extra income and reduces the breakeven point on the stock position.

Purchase price of XYZ	105-1/4
Premium received from call sale	<u>3-1/8</u>
Breakeven on XYZ stock becomes	102-1/8

Note that the covered call seller does have risk of stock ownership, but the risk is reduced by the 3 1/8 premium.

If, at expiration, XYZ is at or above 110, the buyer may exercise the right to purchase the XYZ shares at a price of 110. In this case, the covered call seller must fulfill the obligation to sell stock at the pre-set target price. The covered call seller will therefore have limited upside exposure to XYZ stock.

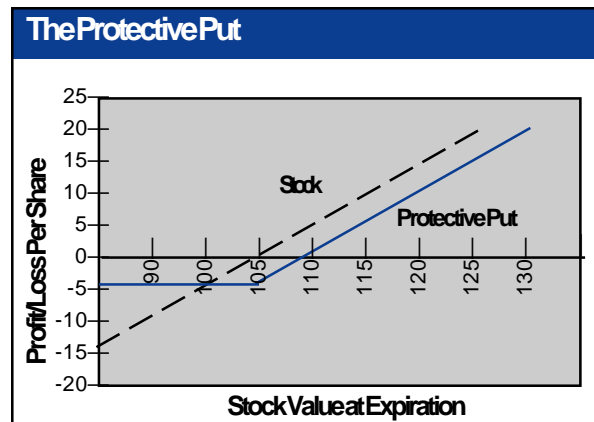
Sale price of XYZ	110
Breakeven price	<u>102-1/8</u>
So the maximum profit is	7-7/8
or	\$787.50 per option contract ⁶

If the stock rallies from 105-1/4 to above 113-1/8 (the 110 strike price plus the 3 1/8 premium) at expiration, simply holding the underlying stock outperforms the covered call strategy. The covered call will outperform outright stock ownership in down markets and neutral to moderately up markets, with reduced downside risk.

⁴ See “The Protective Collar” section of this paper for a discussion of index options.

⁵ “Exercise” means to invoke the right under which the holder of an option may buy (in the case of a call) or sell (in the case of a put) the underlying security.

⁶ Each option contract represents 100 shares of stock, and the price per contract is 100 times the quoted price of the option.



B. The Protective Put⁷

Purchasing put options permits investors managing retirement accounts to limit the downside risk of stock ownership while retaining the upside potential.

Assume that on November 18, XYZ is trading at 105-1/4 and the XYZ "JAN 105"⁸ put option is trading at 4-1/2. An investor holding 1,000 shares of XYZ stock may purchase ten put options against his stock holding.⁹ This investor now owns the right to sell or "put" his shares to another party (at the specified strike price) in the case of a market decline.

If XYZ declines in value, the put options allow the investor to sell 1,000 shares of XYZ (100 shares for each of the ten puts) at the 105 strike price at any time until the contract expires. Please note that the last day to exercise options on individual stocks, or sell them in the open market, is the third Friday of the contract month (in this case, January).¹⁰

Consider, for example, if XYZ declined to 90 at expiration. In this case, the owner of 1,000 shares purchased at 105-1/4 would have a loss of \$15,250:

Purchase 1,000 shares of XYZ	
at 105-1/4	Value = \$ 105,250
1,000 shares of XYZ at 90	Value = <u>\$ 90,000</u>
Loss on stock position	(\$ 15,250)

The owner of 1,000 shares could have limited his losses to \$4,750 by purchasing ten 105-strike put options:

Purchase 1,000 shares of XYZ	
at 105-1/4	Value = \$ 105,250
Sell 1,000 shares of XYZ at 105	
(through exercise)	Value = <u>\$ 105,000</u>
Loss on stock position	(\$ 250)
Premium paid for 10 puts at 4-1/2	
(4 1/2 X \$100 X 10)	<u>\$4,500</u>
Maximum Loss	(\$ 4,750)

In this case, this strategy limited the maximum potential loss to the sum of the put premium paid and the difference between the stock's initial market value and the strike price of the put. The use of the "protective" put has saved this investor \$10,500 (\$4,750 loss vs. \$15,250).

If XYZ is above 105 at expiration, the put will expire worthless for a cost of 4-1/2 per put or \$4,500. Above the breakeven point of 109-3/4 (105-1/4 stock purchase price plus 4-1/2 premium), the position will be profitable. In this case, the investor retains upside potential of the stock.

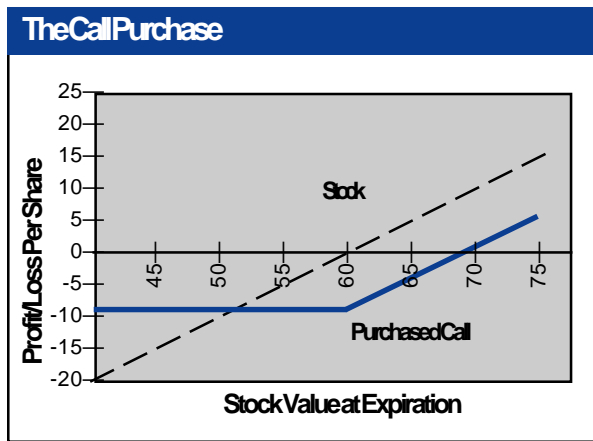
The protective put strategy places a known maximum limit on the risk of the underlying stock, with a predetermined premium cost up-front. This strategy is a useful tool for maintaining stock or stock market exposure through difficult periods.

⁷ A put option contract gives its holder the right, but not the obligation, to sell the underlying security at a specified price (the strike) for a certain, fixed period of time.

⁸ The expression "JAN 105" means that the strike price is 105 and the put expires in January.

⁹ Each option represents 100 shares of stock.

¹⁰ All CBOE options on individual stocks are "American-style." This means they may be exercised at any time between purchase and expiration. Most index options are "European-style." These options may only be exercised during a specified period of time just prior to their expiration. The last day to trade these options is, usually, the Thursday before the third Friday.



C. The "Cash-Secured" Call Purchase

Investors with cash to invest may obtain equity market exposure with limited risk by purchasing call options backed by treasury bills or other cash-like instruments.

Assume that stock XXX is trading at 60 and the 18-month 60 strike LEAPS^{®11} call on XXX is trading at 9. The purchase of each call option grants an investor the right to purchase 100 shares of XXX at the price of 60. The investor has this right until the option expires in 18 months, or until the option is sold in the open market.

If, at expiration, XXX is below the 60 strike price, the call option will not have any value. In this case, the investor will have lost \$9 per share or \$900 per call option purchased. Notice that this is the maximum risk since the investor has the right to purchase stock at 60, but does not have the obligation to do so.

If XXX is above 60 at expiration, the investor may exercise his right to buy the stock at 60. The investor would have a net profit if the price of XXX is higher than the 69 breakeven point (the 60 strike plus the 9 in up-front premium paid). In this case, the investor retains upside potential of the stock.

Compare this strategy to outright purchase of stock by considering two methods for allocating \$6,000 of capital. An investor may purchase 100 shares of stock at \$60 per share and take on \$6,000 of price risk. Alternately, an investor may purchase one call option on this stock for \$900 and place the remaining \$5,100 in interest-bearing "cash" instruments. In this ex-

ample, 100 shares of actual stock on one hand are compared to holding cash and the right to buy 100 shares of stock on the other. The call plus cash alternative ("cash-secured" call) involves lower downside risk (\$900) and exposure to upside potential of the stock (less \$900).¹²

D. The "Cash-Secured" Put Sale

By selling put options backed with cash, investors may increase their stock holdings at targeted prices which are below today's market price. Put sellers obligate themselves to buy stock at the strike price, in exchange for up-front premium.

Assume that stock ZYX is trading at 86 and the 3-month 80-strike put option on ZYX is trading at 3-1/2. The investor who sells one of these puts assumes the obligation to buy 100 shares (100 shares per contract) at the strike price of 80. By selling the put, the investor grants to someone else (the put buyer) the right to sell stock. Therefore, investors selling puts may be forced to buy stock upon exercise by a put holder.

If ZYX is above the 80 strike price at expiration, the put buyer is likely to let the option expire. In this case, the put seller will keep \$3-1/2 per share or \$350 per put option sold, but will not purchase stock. The put seller therefore has limited upside potential profit if the puts are not exercised.

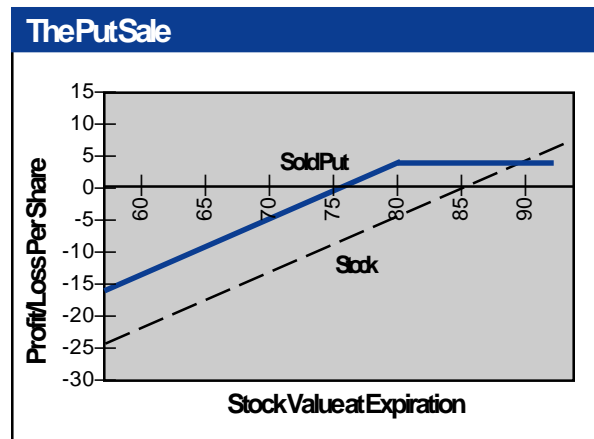
If, at expiration, ZYX is at or below 80, the buyer may exercise his right to sell shares at 80. In this case, the put seller must fulfill the obligation to buy stock at the pre-set target price (the strike price). However, the premium lowers the breakeven on the stock to 76-1/2:

Purchase price (strike) of ZYX	80
Premium received from put sale	<u>3-1/2</u>
Strategy breakeven price	76-1/2

The put seller has the risk of having shares "put" to him, and the market price is lower than the breakeven (76-1/2). The "cash-secured" nature of this strategy means that the put seller holds enough cash to buy the stock. Investors that wish to buy stock at the strike, and

¹¹ "LEAPS[®]" or "Long Term Equity Anticipation Securities[™]" are long-term options. LEAPS can have terms as long as 39 months to expiration.

¹² Call options do not pay dividends, nor do they grant voting rights.



have the cash to do so, may find that selling puts is a useful device for accomplishing their goal.

E. The Protective Collar

The protective collar strategy provides downside protection through the use of put options but finances the purchase of the puts by the sale of covered call options.

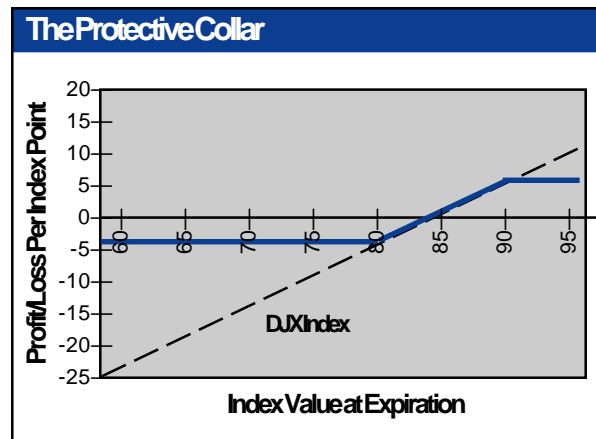
Collars are the simultaneous purchase of put options and sale of call options against stock holdings. The options have the same expiration but the strike of the put is lower than that of the call. The put purchase may provide protection in a falling market and the call sale collects premium to lower the effective cost of the put. However, the call sale also limits upside potential.

Investors who are overly exposed to an individual stock, but not able to sell it for a variety of reasons,¹³ may find collars on individual stocks particularly attractive. However, investors wishing to hedge the risk of a diversified portfolio of stocks or mutual funds may consider using index options.¹⁴ The Chicago Board Options Exchange lists options on over 40 different indexes, including options on the Standard & Poor's 500 Stock Index® (ticker symbol "SPX™") and the Dow Jones Industrial AverageSM (ticker symbol "DJX").

¹³ See "Employer Stock May Be Risky For Nest Eggs," *Wall Street Journal*, Feb. 11, 1998, p. C1. This article states: "... Americans have as much as one-third of their 401(k) and other retirement-plan savings invested in shares of their employer's own stock, an investment choice that may not be particularly prudent."

¹⁴ The use of index options to hedge equity market risk involves tracking error. This is the risk that the index does not move in tandem with the investor's underlying exposure.

¹⁵ Investors selling index options in an IRA must be able to meet exercise obligations, as discussed in the "Tax Considerations" section of this paper.



As an example, consider an investor maintaining an index fund roughly matching the composition of the Dow Jones Industrial AverageSM (DJIA). The investor might consider options on this index to protect the fund, as opposed to options on each of the stocks in the fund. Unlike options on single stocks, exercise of index options does not result in the delivery of stock but results in a cash settlement.¹⁵

Assume that the investor wants to establish a collar to protect \$255,000 in fund value from a market decline of greater than 5 percent for the next 7 months. Furthermore, assume that the DJIA is currently at 8,400. DJX options are based on 1/100th of the value of the DJIA, so the DJX index value would be 84.00. As with most listed options, DJX options have a \$100 multiplier, so the underlying value would be \$8,400.

The investor may determine the desired quantity of options by dividing the amount to be hedged (\$255,000) by the current underlying value for DJX options (\$8,400), *i.e.* $255,000/8,400 = 30.36$. Since fractional contracts cannot be purchased, assume the investor implements the DJX collar by purchasing 30 put options and selling 30 call options.

To protect the fund from a market decline of greater than 5 percent, and with the DJIA at 8,400, assume the investor purchases the 7-month 80.00 strike DJX puts

at 3-1/4 (\$325 each). Next, the investor may choose to select a call contract currently quoted at a price sufficient to pay for the put purchase. Assume the investor sells the 7-month 88.00 strike DJX calls at 3-3/4 (\$375 each). Before commissions, this collar can be established for a net credit of \$1,500: \$50 net premium received (\$375 - \$325) on 30 contracts.

Possible Outcomes at Expiration

- **The Index Rises** – The fund participates in any upside move up to the strike price of the calls. Above the 88.00 DJX level (DJIA over 8,800), losses from the short call position offset gains in the underlying fund.¹⁶ The puts expire worthless.
- **The Index Remains Stable** – If the index remains between the put strike of 80.00 and the call strike of 88.00, all options expire worthless. Between 84.00 and 88.00, the fund profits (enhanced by the \$1,500 net premium received). Between 84.00 and 80.00, the fund loses money (partially offset by \$1,500).
- **The Index Falls** – For downside moves exceeding approximately 5%, the fund has protection from further declines. With the DJX below 80.00 at expiration (DJIA below 8,000), gains from the long put position offset losses in the underlying fund.¹⁷ The calls expire worthless.

Financial Integrity of Exchange-Listed Options

The Options Clearing Corporation (OCC) issues all CBOE options contracts. The OCC has a “AAA” credit rating from Standard & Poor’s. OCC provides market and systemic safety to the listed securities options markets in the U.S. As the issuer of exchange listed options, OCC in effect becomes the buyer to every clearing member representing a seller and the seller to every clearing member representing a buyer.

OCC’s role is supported by a three-tiered safeguard system. Qualifications for OCC membership are stringent to protect OCC and its clearing members. Each clearing member applicant is subject to a thorough initial assessment of its operational capability, the experience and competence of its personnel, and its financial condition in relation to predefined standards. After tough membership standards, OCC’s second line of defense against clearing member default is member margin deposits. OCC currently holds billions in aggregate clearing member margin deposits. The third line of defense is the clearing members’ contributions to the clearing fund. A member’s clearing fund deposit is based upon its options activity and is computed monthly. OCC’s clearing fund totals hundreds of millions of dollars.

In addition to the OCC safeguards, the CBOE has adopted its own rules and regulations to better promote a fair and orderly marketplace. Both the CBOE and the OCC operate under the jurisdiction of the SEC and are obliged to follow federal securities laws and regulations.

All brokerage firms conducting public options business must furnish options customers with the options disclosure document, ***Characteristics and Risks of Standardized Options*** at or prior to account approval or with any option sales literature utilized. Firms are also obligated to establish each customer’s suitability for options trading to ensure that all options recom-

¹⁶ If the DJX is above the call strike (88.00) at expiration, the call seller pays the cash difference between the DJX settlement value and the (88.00) strike. Also note that DJX options are “European-style.” This means that the call seller does not risk exercise by a call holder before the exercise period (but may purchase the call in the open marketplace in order to close out the position).

¹⁷ If the DJX is below the put strike (80.00) at expiration, the put buyer receives the cash difference between the put strike (80.00) and the DJX settlement value. Also note that DJX options are “European-style.” This means that the put buyer may not exercise before the exercise period (but can sell the put in the open marketplace in order to close out the position).

recommendations made to customers are suitable in light of their investment objectives, financial situation and needs.

Registered Representatives must pass a registration exam, the Series 7 exam, that tests their knowledge of the securities industry, options, federal law and regulations, and exchange rules. Branch office managers require more training, experience and must pass a more advanced exam, the Series 8 exam, concerning the supervision of Registered Representatives. Options advertising and educational material provided to customers must be prepared in compliance with certain rules and regulations before dissemination, and must be approved by the firm's Compliance Department and a self-regulatory organization of which the firm is a member.

Overview of Legal and Accounting Issues

IRAs

IRAs consist of assets that were either contributed to the IRA by the individual,¹⁸ or distributed from an employer-sponsored retirement plan.¹⁹ IRAs take two forms: "trusteed" or "custodial." Trusteed IRAs have a trustee, such as a bank, which holds the assets. Many IRAs with trustees permit the trustee to manage and invest the assets of the IRA. Other trusteed IRAs permit the IRA owner to direct how the trustee will

invest the IRA assets. In either case, the trustee will be subject to certain fiduciary responsibility rules of the state in which the IRA trustee is located.²⁰

The other type of IRA is a custodial account. Most brokerage firms, as well as many other financial institutions, offer self-directed custodial IRAs. Since there is no trustee of the account, the owner is fully responsible for investment decisions, and state law fiduciary liabilities do not arise from the management of the account.²¹

B. Keogh Plans Covering Employees

Keogh Plans also consist of assets that were either contributed to the Plan by the individual, or distributed from an employer-sponsored retirement plan. However, Keogh Plans are subject to considerably higher contribution limits that apply generally to employer-sponsored retirement plans.²² Keogh plans that cover employees as well as owners are subject to the fiduciary responsibility rules of the Employee Retirement Income Security Act of 1974 ("ERISA").²³

ERISA imposes on the individuals responsible for investing retirement plan assets the obligation to carry out investments prudently and in the exclusive interest of plan participants.²⁴ The Department of Labor has informally indicated that the use of derivatives, including exchange-listed options, in retirement plan

¹⁸ The contribution requirements and limits for IRAs have changed from time to time. See I.R.C. Sec. 219. In 1998, the limit is \$2000 in any one year or 100% of compensation, if less. A taxpayer and spouse may contribute up to \$4000 per year. Contributions are deductible in whole or part if the individual is not covered by a qualified retirement plan during the year or if compensation does not exceed certain permitted levels. In 1998, contributions are not deductible if the individual is covered by a qualified plan and income exceeds \$60,000 for married taxpayers filing a joint return. If an individual is not covered by a plan, the individual may deduct up to \$2,000 even if the spouse is covered by a plan as long as income does not exceed \$150,000 for married taxpayers filing a joint return. Non-deductible contributions can be made up to the \$2000 limit even if the deduction is limited or denied. A special type of plan, called a Simplified Employee Pension ("SEP"), permits annual IRA contributions by an employer of up to the lesser of 15% of compensation or \$30,000. See I.R.C. § 408(k).

¹⁹ Distributions from a qualified retirement plan can normally be transferred tax free into an IRA or another qualified employer-sponsored retirement plan. See I.R.C. § 402.

²⁰ It is beyond the scope of this paper to discuss fiduciary rules in detail. However, plans that are subject to ERISA (discussed later) are not subject to state laws regulating trust investments, since ERISA preempts state laws that would otherwise regulate the management of plans subject to ERISA. Trusteed Keogh plans that are not subject to ERISA and trusteed IRAs are subject to the trust laws of the state where the trust is located. Almost all states have adopted a rule that requires a trustee to invest trust funds as a prudent man would but the application of this rule varies widely from state to state. Further, the investment standard may normally be varied by the terms of the trust instrument. In all cases, trusteed IRAs and trusteed Keogh plans must be examined in light of local law and the trust instrument to determine the extent to which option strategies are permissible.

²¹ However, Registered Representatives and broker-dealers recommending the purchase or sale (writing) of options must nonetheless reasonably believe that the recommendation is appropriate in light of the customer's investment objectives, ability to withstand risks, and level of sophistication.

²² In 1998, Keogh Plan participants can have contributions as high as \$30,000 or 25% of taxable earned income, if less.

²³ 29 U.S.C.A. 1101 *et. seq.*

investments may be appropriate, but generally requires a higher level of expertise and analysis than more traditional investments.²⁵

The Department of Labor has issued regulations that permit fiduciary liability exposure to be greatly reduced in plans where investments are self-directed by participants.²⁶ However, due to limitations on this protection and the complexity of the rules, this approach is seldom taken as an avenue to permit options trading. As a result, while options are used in the investment strategies of plans subject to ERISA, they tend to be limited to the most conservative approaches such as the sale of covered call options.

C. Keogh Plans Covering Only Owners

Keogh Plans that do not cover any employees (in other words, cover only the owners) are not subject to ERISA and its fiduciary standards.²⁷ Trusteed Keogh plans, like trusteed IRAs, are subject to state trust laws. However, Keogh Plans that cover only owners may use a custodial account instead of a trust and, therefore, state trust laws would not apply.

D. Tax Considerations

1. General Tax Rules

Gains and other income generated within an IRA or Keogh Plan are generally not taxable. By the same token, losses are not tax deductible. The owner or beneficiary is taxed at ordinary income tax rates as the assets of the account or plan are distributed. In general, withdrawals before the owner or beneficiary reaches age 59-1/2 are also subject to a 10% excise tax penalty. Distributions must begin by age 70-1/2 or excise tax penalties will apply.

A new type of IRA, called the "Roth IRA" is first available in 1998. Like a traditional IRA, profits and losses in a Roth IRA are not taxable. However, unlike a traditional IRA, contributions to a Roth IRA are not deductible, while distributions from Roth IRAs are not taxable. In addition, Roth IRAs

are not subject to the rule that requires distribution to begin at age 70-1/2. Amounts from other IRAs and qualified plans can be transferred to a Roth IRA, but this results in tax on the amounts transferred. Annual contributions to Roth IRAs are limited to the amounts that could be contributed to a traditional IRA and deducted. An individual's ability to make contributions to a Roth IRA or to convert a traditional IRA into a Roth IRA is not allowed if the individual's adjusted gross income exceeds certain limits.

Another new type of IRA, called an "educational IRA," is first available in 1998. As long as a person's modified annual adjusted gross income does not exceed \$150,000 for joint filers (\$95,000 for single filers), the individual may make a non-deductible contribution of up to \$500 per child per year to an educational IRA. Earnings on contributions will be distributed tax free, if they are used to pay the beneficiary's post-secondary education expenses.

Certain small businesses may establish a so-called "SIMPLE IRA." An employee participating in a SIMPLE IRA may make an elective contribution of up to \$6,000 per year to the IRA, which may be matched by the employer for a maximum contribution of \$12,000 on behalf of the employee to the SIMPLE IRA. The contributions are excludable from the employee's taxable income. Like traditional IRAs, distributions from a SIMPLE IRA will be taxable.

2. Prohibited Transaction Rules

IRAs and Keogh Plans are subject to prohibited transaction rules contained in the Internal Revenue Code, which also apply to other qualified retirement plans.²⁸ These rules generally prohibit an owner or beneficiary from using the assets of the account or plan for any purpose other than investment for the benefit of the owner or beneficiary. (For example,

²⁴ 29 U.S.C.A. 1104.

²⁵ Letter from Olena Berg, Assistant Secretary, Pension and Welfare Benefits, Department of Labor, to Eugene Ludwig, Comptroller of the Currency, March 21, 1996.

²⁶ 29 C.F.R. § 2550.404c-1.

²⁷ See 29 C.F.R. § 251.3-3(b).

²⁸ I.R.C. § 4975.

the assets cannot be borrowed by the owner or invested with the owner's company.) Likewise, transactions between the account or plan and a "disqualified person"²⁹ (including the owner/beneficiary, owner's/beneficiary's family, and other related parties) may result in tax penalties and potential loss of special tax status of the account or plan.³⁰

The purchase and sale of options in the open market are not prohibited transactions. However, Internal Revenue Code prohibited transaction rules prohibit the IRA or Keogh Plan account holder from loaning money to the account. Likewise, the holder cannot guarantee borrowing by the account or cover its losses. Furthermore, annual contribution limits restrict new money that can be put into an account. Therefore, any option strategy that could result in losses that could not be covered with cash or by the sale of liquid securities held by the account or by amounts which can be contributed to it within permitted levels should be strictly avoided. Otherwise, it would not be possible to cover account losses without committing a prohibited transaction or over contributing to the account, both of which result in unfavorable tax consequences, including the potential of tax penalties.

In the event an IRA or Keogh Plan account holder pursued the strategy of writing calls on a cash-settled index option, such as writing a call based on the Dow Jones Industrial Average™ (ticker symbol "DJX"), and was assigned, the Internal Revenue Code does not consider the settlement debit to the account to be a distribution or withdrawal. However, as noted above, the IRA or Keogh Plan should strictly avoid this strategy if the account does not have sufficient cash or liquid securities to cover any losses, or the beneficiary is prevented from contrib-

uting additional monies to the account due to annual contribution limits.

E IRA or Keogh Plan Income Subject to Tax

IRAs and Keogh Plans are subject to income tax if they generate earnings that are considered to result from the conduct of a business or from leveraged investments such as rents from mortgaged real estate.³¹ The IRS has informally ruled that income from the purchase and sale of options is investment income that is not subject to these taxes.³² Likewise, although many types of option transactions require margin to protect the brokerage firm against losses, the IRS has ruled that the normal use of margin in connection with the trading of options does not give rise to taxable income for an IRA.³³

Unlike margin purchases of stock, which involves borrowing the purchase price of the stock from the broker and depositing cash or liquid securities as collateral for that loan, a margin deposit made in connection with certain option transactions protects the broker against losses, but does not involve borrowing from the broker. As long as the purchase price for an option is paid in full by its settlement date and as long as any required margin deposits are made within the specified time period, there is no borrowing involved in the transaction and, therefore, no debt-financed income. If, however, a buyer of an option fails to pay for the option on settlement date or a seller of an option fails to make a required margin payment and the broker extends credit to make the settlement or margin payment, this would constitute debt financed income. Therefore, in the event an IRA or Keogh Plan does not have sufficient cash to pay for an option or margin payment, either the options themselves or other assets must be liquidated to avoid extension of credit.

²⁹ The term "disqualified person" includes a fiduciary; anyone providing services to the plan or account; the employer; any union representing employees participating; a 50% or greater owner of the employer or union; a family member of any of the foregoing; businesses 50% or greater owned by the foregoing (except family members); and officers, directors, 10% shareholders and highly compensated employees of the employer, union, their owners or businesses they own. See I.R.C. § 4975(e)(2).

³⁰ Prohibited transactions include the sale, exchange or leasing of property; lending of money or other extension of credit; furnishing of goods, services or facilities; transfer to, or use of the assets or income of the plan or account; fiduciary self-dealing with plan assets and kickbacks from third parties dealing with the plan or account. See I.R.C. § 4975(c)(1).

³¹ I.R.C. §§ 511 through 514.

³² Private Letter Ruling 8832052.

³³ *Ibid.*

The foregoing is provided only as general information and should not be relied on as definitive legal or accounting advice. An IRA or Keogh Plan contemplating the use of options as a part of an investment strategy should consult its own counsel and accountants before making a final decision with respect to such a program.

Appendix: Glossary of Options Terms

American-style Option: An option contract that may be exercised at any time between the purchase and the expiration.

Assignment: The receipt of an exercise notice by an option writer (seller) that obligates him to sell (in the case of a call) or purchase (in the case of a put) the underlying security at the specified strike price.

At-the-money: An option is at-the-money if the strike price of the option is equal to the market price of the underlying security.

Call: An option that gives the holder the right to **buy** an underlying instrument, such as a stock or an index value, at a specified price for a certain, fixed period of time.

Cash settlement: The process by which the terms of an option contract are fulfilled through the payment or receipt in dollars of the amount at which the option is in-the-money as opposed to delivering or receiving the underlying stock.

Clearing Corporation (or Clearing House): The business entity through which transactions executed on the floor of an exchange are settled using a process of matching purchases and sales.

Clearing Member: A member firm of the Clearing Corporation.

Closing purchase: A transaction in which the purchaser's intention is to reduce or eliminate a short position in a given option.

Closing sale: A transaction in which the seller's intention is to reduce or eliminate a long position in a given option.

Covered call option writing: A strategy in which one sells call options while simultaneously owning an equivalent position in the underlying security.

Derivative security: A financial security whose value is determined in part from the value and characteristics of another security, the underlying security.

Equity options: Options on shares of individual common stocks.

European-style options: An option contract that may only be exercised during a specified period of time just prior to its expiration.

Exercise: To implement the right under which the holder of an option is entitled to buy (in the case of a call) or sell (in the case of a put) the underlying security.

Exercise price (See *Strike price*)

Exercise settlement amount: The difference between the exercise price of an index option and the exercise settlement value of the index on the day an exercise notice is tendered, multiplied by the index multiplier.

Expiration date: Date on which an option and the right to exercise it, cease to exist.

Expiration time: The time of day by which all exercise notices must be received on the expiration date.

Hedge: A conservative strategy used to limit investment loss by effecting a transaction which offsets an existing position.

Holder: The purchaser of an option.

In-the-money: A call option is in-the-money if the strike price is less than the market price of the underlying security. A put option is in-the-money if the strike price is greater than the market price of the underlying security.

Index: A compilation of several stock prices into a single number. Example: the Dow Jones Industrial Average.SM

Index option: An option whose underlying entity is an index. Generally, index options are cash-settled.

Intrinsic value: The amount by which an option is in-the-money (see above definition).

LEAPS® Long-term Equity Anticipation Securities®, or LEAPS®, are long-term stock or index options. LEAPS®, like all options, are available in two types, calls and puts, with expiration dates up to three years in the future.

Long option position: A position wherein an investor's interest in an option is as a net holder (i.e., the number of contracts bought exceeds the number of contracts sold).

Margin requirement (for options): The amount an uncovered (naked) option writer is required to deposit and maintain to cover a position. The margin requirement is calculated daily.

Open interest: The net number of outstanding (unliquidated) purchases or sales of options.

Opening purchase: A transaction in which the purchaser's intention is to create or increase a long position in an option.

Opening sale: A transaction in which the seller's intention is to create or increase a short position in an option.

Option: The right, but not the obligation, to buy or sell an underlying instrument, such as a stock or an index value, at a specified price for a certain, fixed period of time.

Out-of-the-money: A call option is out-of-the-money if the strike price is greater than the market price of the underlying security. A put option is out-of-the-money if the strike price is less than the market price of the underlying security.

Premium: The price of an option contract, determined in the competitive marketplace, which the buyer of the option pays to the option writer for the rights conveyed by the option contract.

Put: An option contract that gives the holder the right

to **sell** an underlying instrument, such as a stock or an index value, at a specified price for a certain, fixed period of time.

Secondary market: A market that provides for the purchase or sale of previously sold or bought options through closing transactions.

Short option position: A position wherein a person's interest in a particular option is as a net writer (i.e., the number of contracts sold exceeds the number of contracts bought).

Strike price: The stated price per share for which the underlying security may be purchased (in the case of a call) or sold (in the case of a put) by the option holder upon exercise of the option contract.

Time value: The portion of the option premium that is attributable to the amount of time remaining until the expiration of the option contract. Time value is whatever value the option has in addition to its intrinsic value.

Uncovered call writing: A short call option position in which the writer does not own an equivalent position in the underlying security represented by his option contracts.

Uncovered put writing: A short put option position in which the writer does not have a corresponding short position in the underlying security or has not deposited cash or cash equivalents equal to the exercise value of the put.

Underlying security: The security subject to being purchased or sold upon exercise of the option contract.

Writer: The seller of an option contract.

Appendix: Overview of CBOE Products

	S&P 100® Index	S&P 500® Index	Dow Jones Industrial Average SM	Russell 2000® Index	Nasdaq-100 Index®	CBOE trades options on the following:																																												
Symbol	OEX® (OEW and OEZ are used for additional series)	SPX™ (SPB, SPQ, SPZ and SXB are used for additional series)	DJX	RUT (RUZ is used for additional series)	NDXSM (NDU and NDZ are used for additional series)	Equities S&P 100 Index LEAPS S&P 500 Index LEAPS S&P 500 Index Long-Dated Options FLEX® Options Equity FLEX Index FLEX																																												
Underlying	Capitalization-weighted index of 100 stocks	Capitalization-weighted index of 500 stocks	Price-weighted index of 30 stocks. Options are based on 1/100th of the DJIA level	Capitalization-weighted index of 2000 stocks	Capitalization-weighted index of 100 stocks	Lipper Analytical/Salomon Brothers Growth Funds Index Lipper Analytical/Salomon Brothers Growth & Income Funds Index Morgan Stanley Multinational Company Index Russell 2000® Index																																												
Multiplier	\$100					LEAPS																																												
Exercise Style	American	European	European	European	European	S&P 500/BARRA Growth Index S&P 500/BARRA Value Index																																												
Expiration Months	4 near-term months	3 near-term months plus 3 additional months from the March quarterly cycle	3 near-term months plus 3 additional months from the March quarterly cycle	Up to 3 near-term months plus 3 additional months from the March quarterly cycle	Decembers up to 2 ½ years in the future	S&P SmallCap 600 Index IPC™ Options CBOE Israel Index Latin 15 Index™ Index CBOE Mexico Index & LEAPS Nikkei 300® Index & LEAPS																																												
1997 Average Daily Volume	144,647	104,722	28,696	2,470	8,148	NYSE Composite Index CBOE Automotive Index CBOE Computer Software Index CBOE Environmental Index																																												
1997 Year-End Open Interest	398,483	1,606,318	292,778	39,140	31,158	CBOE Gaming Index CBOE Gold Index CBOE Internet Index & LEAPS CBOE Oil Index & LEAPS																																												
Trading Hours	8:30 a.m. - 3:15 p.m. Chicago time					CBOE REIT Index CBOE Technology Index & LEAPS																																												
<p align="center">CBOE Annual Options Volume Record 187.2 Million Options Traded in 1997</p> <p>The chart displays annual options volume from 1973 to 1991. The y-axis represents volume in millions, ranging from 0 to 200,000,000. The x-axis shows years from 1973 to 1991. Equity options (white) and index options (maroon) are stacked. Total volume peaks in 1987 at 187.2 million.</p> <table border="1"> <caption>Estimated Annual Options Volume (Millions)</caption> <thead> <tr> <th>Year</th> <th>Equity Options</th> <th>Index Options</th> <th>Total</th> </tr> </thead> <tbody> <tr><td>1973</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>1975</td><td>10</td><td>0</td><td>10</td></tr> <tr><td>1977</td><td>20</td><td>0</td><td>20</td></tr> <tr><td>1979</td><td>30</td><td>0</td><td>30</td></tr> <tr><td>1981</td><td>40</td><td>0</td><td>40</td></tr> <tr><td>1983</td><td>50</td><td>0</td><td>50</td></tr> <tr><td>1985</td><td>60</td><td>10</td><td>70</td></tr> <tr><td>1987</td><td>70</td><td>117.2</td><td>187.2</td></tr> <tr><td>1989</td><td>60</td><td>10</td><td>70</td></tr> <tr><td>1991</td><td>50</td><td>10</td><td>60</td></tr> </tbody> </table>							Year	Equity Options	Index Options	Total	1973	0	0	0	1975	10	0	10	1977	20	0	20	1979	30	0	30	1981	40	0	40	1983	50	0	50	1985	60	10	70	1987	70	117.2	187.2	1989	60	10	70	1991	50	10	60
Year	Equity Options	Index Options	Total																																															
1973	0	0	0																																															
1975	10	0	10																																															
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<p>1-800-OPTIONS www.cboe.com institutional@cboe.com</p>						Dow Jones Transportation Average SM & LEAPS Dow Jones Utility Average SM & LEAPS GSTI Composite Index GSTI Hardware Index GSTI Internet Index GSTI Multimedia Networking Index GSTI Semiconductor Index GSTI Services Index GSTI Software Index S&P Banks Index S&P Chemical Index S&P Health Care Index S&P Insurance Index S&P Retail Index Options S&P Transportation Index Interest Rate Options & LEAPS																																												

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