CBOE
CHICAGO BOARD OPTIONS EXCHANGE

ERISA Pension Funds & Listed Options

Portfolio Management Strategies

Exploring ways
to enhance
a portfolio
by using
listed options

CBOE INVESTOR SERIES — PAPER NO. 4

ERISA Pension Funds & Listed Options:
Portfolio Management Strategies

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ERISA Pension Funds & Listed Options: Portfolio Management Strategies

According to a recent survey, 128 pension fund money managers reported use of options as part of their overall management strategy.[1] Pension fund managers have used options to manage risk for more than two decades.

This paper presents a summary of a number of investment strategies that utilize exchange-listed options and an overview of the regulatory environment confronting managers of U.S. corporate pension fund portfolios.

Portfolio Management Strategies

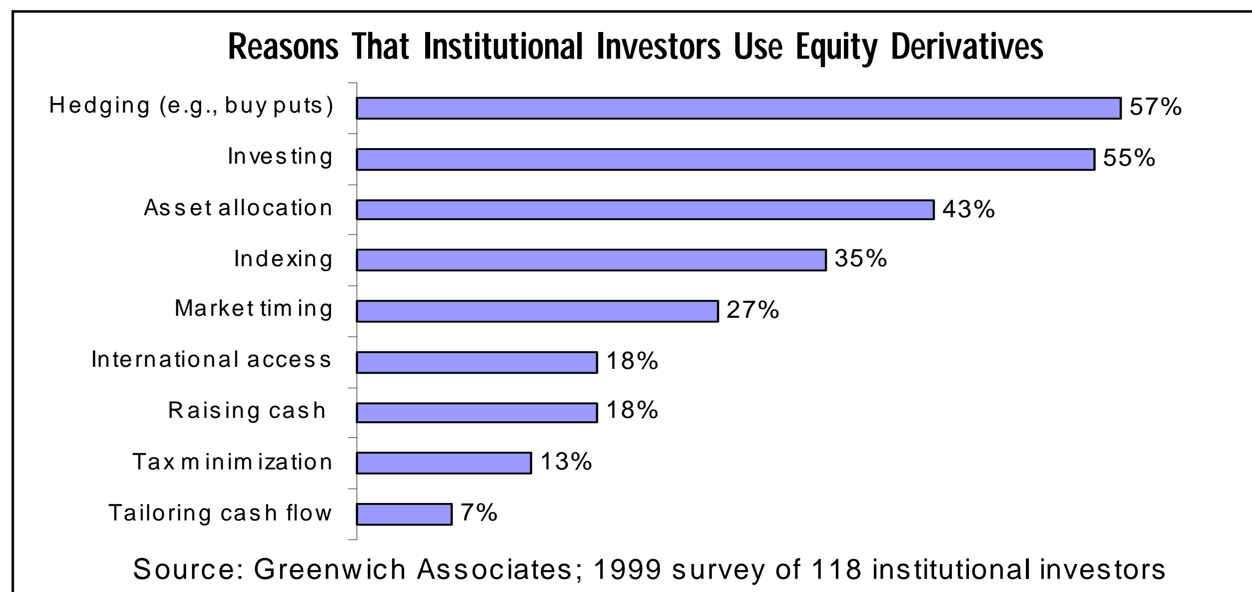
A survey of institutional investors by a major consulting firm noted that these investors use equity derivatives for a variety of reasons, as shown in the following chart.

In light of the fact that "hedging" and "investing" were the two most frequently cited reasons for use of equity derivatives in the survey, the examples presented below focus on hedging and investing. Please note that options are flexible tools that can be used for many purposes.

The examples in this paper are based on hypothetical situations and should only be considered as examples of potential trading strategies. For the sake of simplicity, taxes, commission costs and other transactions costs, as well as tracking error, have been omitted from the examples that follow.

A. Protective Put Options

The purchase of stock index put options permits a portfolio manager to hedge equity market risk by limiting downside risk while retaining upside potential.



[1] *Pensions & Investments* (May 12, 1997), p. 27.

Table 1: Protective Put Positions

1 Range of Market Outcomes	2 S&P 500® Expiration Level	3 Value of Unprotected Portfolio	4 Profit/Loss Index Options	5 Profit/Loss Protected Portfolio	6 Value of Protected Portfolio
+ 15.0%	1,035.00	103,500,000	(2,000,000)	11,500,000	101,500,000
+ 7.5%	967.50	96,750,000	(2,000,000)	4,750,000	94,750,000
0.0%	900.00	90,000,000	(2,000,000)	(2,000,000)	88,000,000
- 7.5%	832.50	83,250,000	4,750,000	(2,000,000)	88,000,000
- 15.0%	765.00	76,500,000	11,500,000	(2,000,000)	88,000,000

As a simple hypothetical, assume Fund X's portfolio roughly matches the composition of the Standard & Poor's® 500 Stock Index (SPX) and that the SPX currently is at a level of 900.

Fund X's portfolio manager wants to establish a hedge to protect $90 million of the fund's value. Assume that the fund manager determines the number of put option contracts to purchase by dividing the amount to be hedged ($90,000,000) by the current aggregate SPX value (900 x $100 or 90,000), *i.e.* 90,000,000/90,000 = 1,000.

If the premium for an SPX put with a 900 strike price and 30 days until expiration is quoted at a price of 20, the total amount required for the purchase is $2,000,000 (1,000 contracts x 20 premium x $100 multiplier).

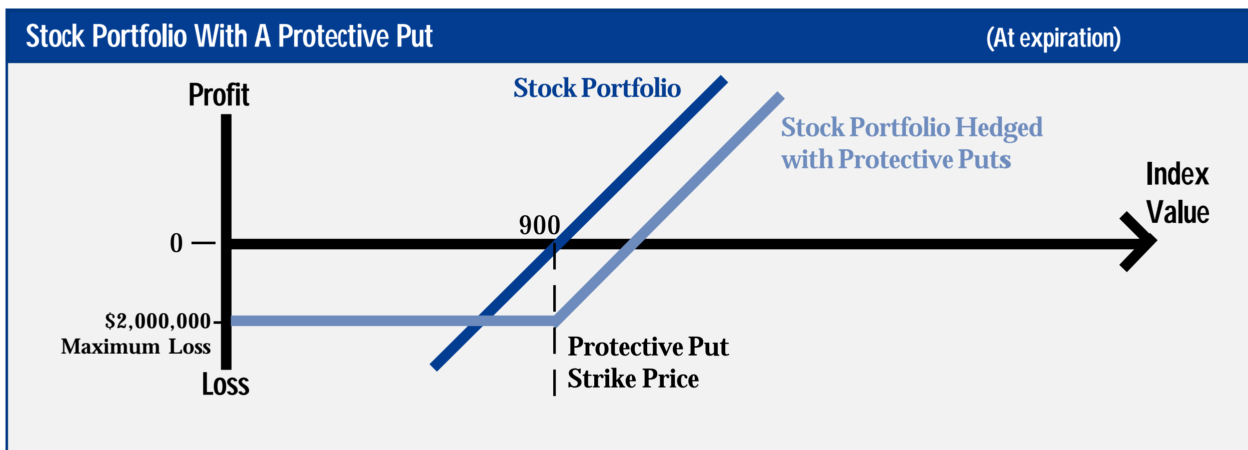
Possible Outcomes

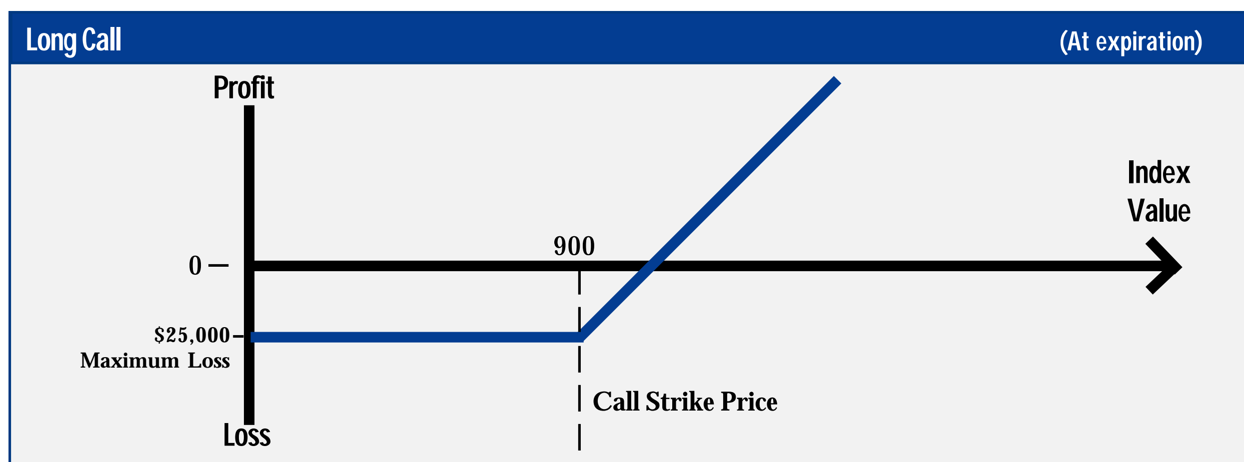
Table 1 illustrates returns for the protective put position under differing market conditions at expiration:

- **The Index Rises** – At expiration, the puts have no value. However, in exchange for the cost of the puts (an insurance expense to the portfolio), the fund manager achieved the goal of establishing a hedge for a portion of the portfolio. Also, note that the portfolio retains any dividends associated with holding the assets. Given the assumption of a correlation between the portfolio and the index, the value of the portfolio increases.

- **The Index Falls** – If the puts are in-the-money, an increase in the value of the puts may approximate the loss in the portfolio's value. Tracking error will undoubtedly have an effect on the actual losses in portfolio value if the composition of the portfolio does not perfectly match the composition of the index. However, the protective puts limit the portfolio's downside, and the portfolio retains any dividends associated with holding the assets. The cost of the puts is an insurance expense to the portfolio.

The figure below graphs index value versus potential gain/loss. Note that a protective put strategy is a combination of long put options and stock.





- **The Index Remains Stable** – The puts have little or no value at expiration, resulting in a loss of the premium, which can be considered an insurance expense to the portfolio. This expense is, at least partially, offset by any dividends associated with holding the assets. The value of the portfolio remains approximately the same.

B. Long Index Call Options for Market Exposure

Index option contracts can provide a portfolio manager with the market exposure necessary to participate in upside gains at a fraction of the cost of transacting in the index components.

A cash influx can pose a strategic dilemma for a portfolio manager. The classic "eat-well/sleep-well" problems posed by the conflicting desires for both high returns and investment security apply whenever a manager makes a determination regarding new or additional investments. By purchasing call options, a manager can preserve cash in declining markets and retain it for various purposes, such as meeting redemptions or for investment in lower yield but essentially "riskless" instruments such as U.S. Treasury securities.

As a simple hypothetical, assume an additional $900,000 of cash flows into Fund X's $90 million portfolio. Instead of simply adding an additional 1 percent to its portfolio of common stock, the fund manager can purchase SPX call options. With the SPX at a level of 900, the 900 strike call with 30 days until expiration might be quoted at a premium of 25. The fund purchases 10 call options (900,000/90,000=10) for a total cost of $25,000 (10 x 25 x 100).

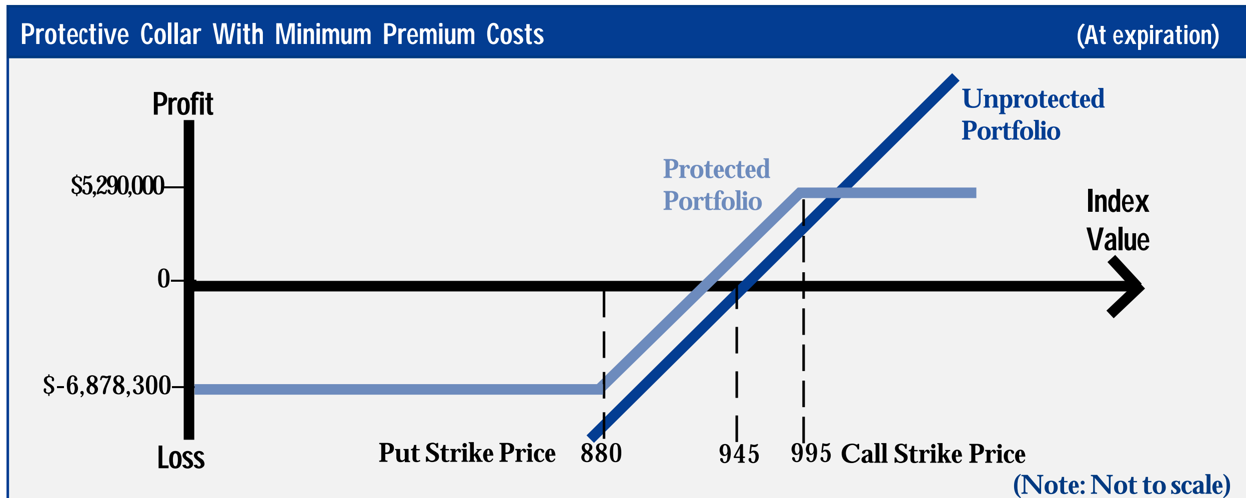
The call purchase provides exposure to the broad market in proportion to the $900,000 influx, limits the downside risk to the cost of the calls, and the portfolio retains the remaining cash, in the amount of $875,000.

C. Protective Collar

The protective collar strategy provides downside protection through the use of index put options but finances the purchase of the puts through the sale of short index call options, in effect trading away some upside potential. By simultaneously purchasing put options and selling call options with differing strike prices and the same expiration (the strike of the put is lower than that of the call), a collar often can be established for little or no out-of-pocket cost. The index puts place a "safety net" under a diversified portfolio by protecting value in a declining market, "insurance" against the risk of a decline. The index call sale generates income to offset the purchase of the protective puts. It is important to note that, depending on the call strike price and the level of the index at expiration, assignment of the short call position will have the effect of limiting portfolio gains.

As a simple hypothetical, assume Fund X maintains a portfolio roughly matching the composition of the Standard & Poor's® 500 Stock Index (SPX) and that the SPX is at 945.

Fund X's manager wants to establish a collar to limit losses on $100 million of the fund's value to 7



percent or less for the next 30 days. The fund manager might determine the number of times to effect the collar by dividing the amount to be hedged ($100,000,000) by the current aggregate SPX value (945 x $100 or $94,500), *i.e.*

$$\frac{\$100{,}000}{\$94{,}500} = 1{,}058.2$$

Since fractional contracts cannot be purchased, assume the fund implements the SPX collar by selling 1,058 call options and purchasing 1,058 put options.

To establish the collar, the fund manager might select an SPX put contract with a strike price approximately 7 percent below the current aggregate SPX value. With the SPX at 945, an SPX put contract with a strike price of 880 and 30 days until expiration might be quoted at 4-5/8.

Next, the fund manager may choose to select a call contract currently quoted at a price sufficient to pay for the put purchase. With the SPX at 945, an SPX call contract with a strike price of 995 and 30 days until expiration might be quoted at 5-1/2.

This collar can be established for a net credit of $92,575: $581,900 received from sale of calls (1,058 call contracts sold x $5.50 premium x $100) less $489,325 paid for purchase of puts (1,058 put contracts purchased x $4.625 premium x $100).

Possible Outcomes

- **The Index Rises** – The portfolio participates in any upside move up to the strike price of the calls. Above the 995 index level, losses from the short call position offset gains in the underlying portfolio. The puts expire worthless.

- **The Index Falls** – The portfolio has protection on the downside. Below the 880 index level, gains from the long put position offset losses in the underlying portfolio. The calls expire worthless.

- **The Index Remains Stable** – If the index remains between the put strike of 880 and the call strike of 995, the options expire. The $92,575 net premium received could add value to the portfolio.

D. Equity Options Strategies

In addition to the uses of index options that are summarized above, in recent years there has been growing use of options on individual equities. Annual volume in equity options at the CBOE grew 158% from 1992 to 1997. Among the many strategies for which investors use equity options are the following:

- Buying Calls
- Covered Call Writing
- Protective Put Options as a Hedge
- Cash-secured Puts

Please visit the CBOE web site at http://www.cboe.com for more information.

Financial Integrity and Regulation 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 the 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 ensure 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***. Firms are also obligated to establish each customer's suitability for options trading to ensure that all options 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 and must pass a more advanced exam, the Series 8 exam, concerning the supervision of brokers. 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 Issues Related to Pension Fund Use of Listed Options

Unlike public employee retirement systems, which generally are governed by state statutes and local provisions, private U.S. employee retirement systems are primarily governed by one federal act - the Employee Retirement Income Security Act of 1974 ("ERISA").[2] ERISA sets forth a comprehensive scheme of regulation which, among other things, regulates investments by corporate pension plans and those who have responsibility for administering and managing them.

The following is provided only as general information and should not be relied on as definitive legal or accounting advice. A fund 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.

A. Structure of ERISA

ERISA applies in general to private pension plans maintained by an employer for the benefit of its employees. It does not apply to government plans, church plans and individual retirement accounts. ERISA is divided into four sections: (i) Title I, which covers reporting and disclosure, and fiduciary requirements, administered by the DOL; (ii) Title II, which amended the Internal Revenue Code ("IRC") and is administered by the Treasury Department;

[2] 29 U.S.C. §1001 *et seq.*

(iii) Title III, which apportions responsibilities among the DOL and IRS; and (iv) Title IV, which created the Pension Benefit Guaranty Corporation which acts as an insurer for certain pension benefits.[3]

B. Portfolio Theory of Investment

Prior to ERISA, fiduciary standards were based on principles of common trust law that favored preservation of capital and attainment of adequate return, and these standards were applied to each separate investment in a portfolio. Because of the special nature of employee benefit plans, however, ERISA espouses the modern portfolio theory of investment. That is, individual investments will not be considered per se prudent or imprudent, but will be evaluated in light of the whole portfolio of investments that the plan holds. Therefore, it is permissible to take some risk in this area.[4]

Regulations published by the Department of Labor ("DOL") in 1979 took an expansive view of the investment standards a fiduciary must maintain. The DOL regulations provide a "safe harbor" that stresses procedure and due diligence over particular types of investments when determining whether an investment is proper for a plan to make. A fiduciary must still review each investment decision by granting "appropriate consideration" to the relevant facts and circumstances, which includes a determination that the investment is reasonably designed, as part of the portfolio, to further the purposes of the plan, considering: risk of loss; opportunity for gain; and evaluation of certain factors.[5] Based on this standard of review, an investment could make money and still be imprudent or, conversely, lose money and still be prudent.[6] The justification for any investment is its role in the overall portfolio.

C. Fiduciary Duties - The Prudence Rule

The fiduciary rules of ERISA impose strict standards on those dealing with plan assets.[7] These provisions apply to fiduciaries of both pension and welfare benefit plans.[8] However, Title I of ERISA and, thus, the fiduciary standards within it, does not cover Keogh Plans that benefit only self-employed individuals[9] and their spousal beneficiaries.[10]

Section 404 of ERISA sets forth requirements that have come to be known as the prudence rule. This section provides that a fiduciary must discharge his or her duties solely in the interest of the participants and beneficiaries of the plan and for the exclusive purpose of providing benefits to them and defraying reasonable expenses of administering the plan. Further, these duties must be carried out:

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[3] Liabilities for plan terminations and withdrawals are also imposed by this Title.

[4] "ERISA does not require that a pension fund take no risk with its investments. Virtually every investment entails some degree of risk, and even the most carefully evaluated investments can fail while unpromising investments may succeed." Marshall v. Glass/Metal Ass'n & Glaziers & Glassworkers Pension Plan, 507 F. Supp. 378, 384 (D. Haw. 1980).

[5] These factors include: (i) the diversification of the portfolio, (ii) the liquidity and current return of the portfolio relative to the anticipated cash flow requirements of the plan, and (iii) the projected return of the portfolio relative to the funding objectives of the plan. *See* Donovan v. Mazzola, 716 F.2d 1226, 4 E.B.C. 1865 (9th Cir. 1983), *cert. denied* 464 U.S. 1040 (1984).

[6] "The ultimate outcome of the investment is not the yardstick by which the prudence of the fiduciary is measured." GIW Indus. Inc. v. Trevor, Stewart, Burton & Jacobsen, Inc., 10 E.B.C. 2290 (S.D. Ga. 1989), *aff'd* 895 F.2d 729 (11th Cir. 1990); *see also* Fink v. Nat'l Sav. & Trust Co., 772 F.2d 951, 957, 6 E.B.C. 2269 (D.C. Cir. 1985) (stating "a fiduciary's independent investigation of the merits of a particular investment is at the heart of the prudent person standard"); DeBruyne v. Equitable Life Assurance Soc'y, 720 F. Supp. 1342, 1347-49 (N.D. Ill. 1989), *aff'd* 920 F.2d 457 (7th Cir. 1990) ("[T]he court must consider the prudence of defendants' conduct at the time they made the investments").

[7] *See* Sections 401-414 of ERISA, 29 U.S.C. §1101-1114.

[8] Welfare benefit plans are plans providing for life, health, disability, other insurance-type benefits, severance benefits, vacations and other fringe benefits.

[9] Self-employed individual is defined in 26 U.S.C. §401(c).

[10] Schwartz v. Gordon, 761 F.2d 864 (2d Cir. 1985). A Keogh Plan that covers both self-employed individuals and other employees is subject to the fiduciary standards of Title I.

With the care, skill, prudence and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.[11]

The Section also provides that a fiduciary must carry out his or her duties in accordance with the plan documents insofar as they are consistent with ERISA. Finally, a fiduciary must diversify the investments of the plan to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so. The degree of investment concentration that would violate this requirement to diversify cannot be stated as a fixed percentage, because a prudent fiduciary must consider the facts and circumstances of each case.[12]

Definition of "Fiduciary"

To understand the applicability of these rules, it is necessary to determine precisely who is considered a fiduciary under ERISA. In general, a person is a fiduciary to the extent he or she:

- exercises discretionary authority/control over the plan or disposition of its assets;
- renders investment advice for a fee; or
- has any discretionary authority or responsibility in the administration of the plan.[13]

Every plan is required to have a "named fiduciary," who is specified in the plan documents. Other persons, however, may also be held to be fiduciaries of the plan.

Plan administrators, trustees, and investment advisors[14] are fiduciaries under the above definition as they have authority over the assets of the plan.

Brokers who only execute orders on the instructions of plan fiduciaries without exercising any discretionary authority or control are not considered fiduciaries merely because of such activity.[15]

Plan attorneys, accountants, actuaries and consultants generally are not considered fiduciaries when acting within the scope of their professional duties.[16]

D. Prohibited Transactions

Fiduciaries of an employee benefit plan are not allowed to engage in certain transactions. Section 406 of ERISA divides these "prohibited transactions" into two groups:

- Transactions between the plan and a party in interest (which includes a fiduciary and any person providing services to a plan);[17]

[11] This phraseology has led some people to proffer the conclusion that ERISA has done more than reiterate the traditional prudent person standard, but instead has set forth a prudent expert standard. But, indeed, the ERISA prudence rule is a flexible standard requiring varying degrees of expertise depending upon the nature and needs of the plan.

[12] The factors to consider include (1) purposes of the plan; (2) amount of the plan assets; (3) financial and industrial conditions; (4) type of investment, whether mortgages, bonds or shares of stock or otherwise; (5) distribution as to geographical location; (6) distribution as to industries; and (7) dates of maturity. Lanka v. O'Higgins, 810 F. Supp. 379 (N.D.N.Y. 1992); *see also* GIW Indus., 10 E.B.C. 2290.

[13] 29 U.S.C. §1002(21)(A); I.R.C. 4975(e)(3); *see also* Eaves v. Penn, 587 F.2d 453, 458 (10th Cir. 1978).

[14] 29 U.S.C. §1002(38).

[15] Schetter v. Prudential-Bache Securities, Inc., 695 F. Supp. 1077 (E.D. Cal. 1988); Farm King Supply, Inc. Integrated Profit Sharing Plan v. Edward D. Jones & Co., 884 F.2d 288 (7th Cir. 1989). *But see* Stanton v. ShearsonLehman/Am. Express, Inc., 631 F. Supp. 100, 7 E.B.C. 1579 (N.D. Ga. 1986) (broker held to be a fiduciary because of exercise of authority, or control over management or disposition of plan assets, when executing order based on broker's own specific, unsolicited recommendations, where client is dependent upon and relies upon broker's special expertise); and Olson v. E.F. Hutton & Co., Inc., 957 F.2d 622 (8th Cir. 1992) (stating when a "broker has usurped actual control over a technically non-discretionary account, the broker owes his customer the same fiduciary duties as he would have had the account been discretionary from the moment of its creation. Thus, the absence of any grant of authority to [the broker] does not automatically preclude a finding that he is a fiduciary.")

[16] D.O.L. Regs. 29 C.F.R. §2509.75-5; Useden v. Acker, 947 F.2d 1563, 1577-78 (11th Cir. 1991), *cert. denied* 113 S. Ct. 2927 (1993) (attorneys); Pappas v. Buck Consultants, Inc., 923 F.2d 531, 534-37 (7th Cir. 1991) (actuaries); Painters of Philadelphia Dist. Council No. 21 Welfare Fund v. Price Waterhouse, 879 F.2d 1146, 1149-51 (3d Cir. 1989) (accountants); Pension Plan of Pub. Serv. of New Hampshire v. KPMG Peat Marwick, 815 F. Supp. 52 (D.N.H. 1993) (accountants).

[17] A fiduciary shall not cause the plan to engage in a transaction between the plan and a party in interest involving (1) a sale, exchange or leasing of any property, (2) the lending of money or other extension of credit, (3) the furnishing of goods, services or facilities, (4) the transfer to, or use by or for the benefit of, a party in interest, of any assets of the plan, and (5) the acquisition of any employer security or real property in violation of ERISA 407(a), which prohibits a plan from acquiring or holding employer property or securities in excess of 10 percent of the fair market value of the assets of the plan. 29 U.S.C. §1106(a).

- Transactions between the plan and a fiduciary.[18]

Any fiduciary who breaches a fiduciary duty by causing the plan to engage in a prohibited transaction shall be personally liable:

- to make good to the plan any resulting losses resulting from such breach,
- to restore any profits to the plan made by the fiduciary, and
- is subject to other equitable or remedial relief, including removal as fiduciary.[19]

Separate penalties are imposed on a fiduciary (other than a fiduciary acting only as such) and other "disqualified persons"[20] that participate in a prohibited transaction.[21]

Exemptions To Prohibited Transactions—Use of Options

There are three types of exemptions from these prohibitions: (i) statutory,[22] (ii) class,[23] and (iii) individual.[24] The exemptions are only available to the individual requester on the specific facts and are not generally applicable.[25]

At first blush it may appear that margin requirements applicable to investments in options contracts would be considered an extension of credit and, thus, would be a prohibited transaction. While there has never been a direct ruling that the use of margin in options contracts is not an extension of credit under Section 406 of ERISA, such usage is common practice and has never been challenged by the DOL or any plan participant or party-in-interest. In addition, there is authority to indicate that this concern is unmerited.

The IRS has taken the position in private letter rulings that the use of margin in commodity and financial futures contracts does not constitute "acquisition indebtedness"[26] because the obligation of the investor is contingent upon the delivery of the underlying commodity or financial instrument. In this regard, the futures contract is in the nature of an executory contract to acquire property at a future date. Therefore, the futures contract is not debt-financed property and the income received from such investment is not taxable as unrelated business income.

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[18] A fiduciary may not (1) deal with the assets of a plan in his own interest or for his own account, (2) act in any transaction involving the plan on behalf of a party whose interests are adverse to the interests of the plan or its participants or beneficiaries, or (3) receive any consideration for his own personal account from any party dealing with such plan in connection with a transaction involving the assets of the plan. 29 U.S.C. §1106(b).

[19] 29 U.S.C. §1109(a).

[20] A "Disqualified person" includes, but is not limited to: (1) a fiduciary, (2) a person providing services to the plan, (3) an employer whose employees are covered by the plan. I.R.C. §4975.

[21] *See* I.R.C. §4975; *see also* O'Malley v. Comm'r of Internal Revenue, 972 F.2d 150 (7th Cir. 1992).

[22] For instance, plan loans to participants and beneficiaries in accordance with other provisions of ERISA, and goods and services provided to a plan by a party-in-interest if no more than reasonable compensation is paid. *See* 29 U.S.C. §1108.

[23] Class exemptions are granted to specific groups of persons regarding designated types of transactions with employee benefit plans after hearings on the matter. The class exemption is generally applicable whenever a member of the class engages in such a transaction.

[24] Individual exemptions are granted on a case-by-case basis if the Secretary of Labor makes a determination that the proposed transaction is administratively feasible, in the interests of the plan and its participants and beneficiaries, and protective of the rights of such participants and beneficiaries.

[25] In 1990, the DOL issued final regulations prescribing procedures for the filing and processing of applications for prohibited transactions exemptions. 29 C.F.R. §§2570.30 to 2570.52.

[26] Organizations exempt from tax under Section 501 of the Code are still subject to tax on income generated from unrelated business activities. This includes income from property acquired through the use of debt ("acquisition indebtedness").

Like a futures contract, an options contract can be characterized as an executory contract as obligations under it are contingent upon the performance of a future event—the exercise of the option. Therefore, according to the same reasoning, an options contract should not be considered debt-financed property.[27]

Further, the Department of Labor has issued an advisory opinion to the Futures Industry Association stating that as margin is in the nature of a performance bond, margin funds in futures contracts are not considered plan assets.[28] This opinion clarifies that the use of margin should not be held a prohibited transaction. Margin funds are not characterized as plan assets and, thus, it should be deemed that there is no extension of credit from the plan. Although this opinion only applied to futures contracts, similar reasoning should be applicable to options contracts as the plan assets should be considered to be the rights embodied in the option contract itself.

E. Trust Requirements— Not an Impediment to Use of Options

ERISA generally requires that plan assets[29] be held in trust by one or more trustees.[30] Therefore, almost all plans have an underlying trust that holds and invests plan assets. Accordingly, before proceeding with a new investment, one should review the trust document for any limitations on types of investments that may be made. For example, if a limitation, such as actively traded securities only, is placed on investments, then actively traded options listed at the CBOE are clearly within the realm of investment opportunities for that trust since such options are securities.

A plan may want to make many types of investments that cannot directly be held in trust, such as options, interests in limited partnerships, venture capital arrangements, and mutual funds. The DOL has provided exceptions to the trust requirement for these types of investments — as long as the indicia of ownership in the underlying investment is held in trust, then the trust requirement is satisfied.[31] In other words, where control over the governing contract, certificate or other instrument is sufficient to provide the trustee with exclusive authority to exercise the plan's rights with respect to the option contract or other investment, the trustee's control of such instrument is sufficient to satisfy the trust requirement.[32]

Two things appear necessary when an ERISA plan invests in securities, including options: (1) Trades should be placed, and investments should be held, in the name of the plan; and (2) A governing agreement should give the trustee the right to exercise control over the trading account.

Conclusion

In conclusion, listed options are flexible investment tools that, when used properly, may help corporate plans meet legal requirements such as the ERISA mandate to diversify so as to minimize the risk of large losses.

[27] It is important to note that these rulings were issued by the IRS regarding unrelated business income as opposed to prohibited transaction issues. The DOL has exclusive authority to rule on prohibited transactions under ERISA. However, the logic and position of the IRS should be applicable to the DOL's analysis on the use of margin as an extension of credit.

[28] D.O.L. Ad. Op. 82-049A (Sept. 21, 1982), 9 Pens. Rep. (BNA) 1394 (1982).

[29] The Department of Labor has issued "plan asset" regulations that attempt to broadly define what is considered to be an asset of a plan. In general, if a plan invests in an entity, the underlying assets of that entity will be considered plan assets. There are four exceptions to this rule that exclude many of the more common investments. These are: (1) non-equity interests; (2) publicly offered securities (or securities issued by a registered investment company); (3) participation by benefit plan investors of less than 25%; and (4) venture capital and real estate operating companies. *See* 29 C.F.R. §2550.403a.

[30] 29 U.S.C. §1103.

[31] 29 C.F.R. §2550.403a-1(b)(3).

[32] Furthermore, the regulations under Section 403 of ERISA clarify that the trust requirement is satisfied if the securities of a plan are held in the name of a nominee or in street name, provided such securities are held on behalf of the plan by a broker or dealer, a "clearing agency" (as defined in the Securities Exchange Act of 1934), a bank or trust company, or a nominee of any of these three entities.

Appendix I: Glossary of Options Terms

American-style Option: An option contract that may be exercised at any time after purchase and prior the expiration date. Most exchange-traded options are American-style.

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.

Class of options: Option contracts of the same type (call or put) and style (American, European or Capped) that cover the same underlying security.

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 series of options.

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

Collar: A contract providing for both a cap (ceiling) and floor (minimum).

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 an individual common stock.

ERISA: The Employee Retirement Income Security Act of 1974; the U.S. federal law that governs the management of corporate pension funds.

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

Exercise: To invoke 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 the 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.

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.

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 position: A position wherein an investor's interest in a particular series of options 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.

Opening purchase: A transaction in which the purchaser's intention is to create or increase a long position in a given series of options.

Opening sale: A transaction in which the seller's intention is to create or increase a short position in a given series of options.

Open interest: The number of outstanding options or futures contracts in the exchange market or in a particular class or series. Refers to unliquidated purchases or sales.

Option: The right, but not the obligation, to buy or sell an underlying instrument, such as a stock, a futures contract 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.

Series: All option contracts of the same class that also have the same unit of trade, expiration date and strike price.

Short position: A position wherein a person's interest in a particular series of options 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.

Type: The classification of an option contract as either a put or a call.

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, in a cash account, 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.

Volatility: A measure of the fluctuation in the market price of the underlying security. Mathematically, volatility is the annualized standard deviation of returns.

Writer: The seller of an option contract.

Appendix II: Overview of CBOE Products

	S&P 100® Index	S&P 500® Index	Dow Jones Industrial Average℠	Russell 2000® Index	Nasdaq-100 Index®
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)	NDX℠ (NDU and NDZ are used for additional series)
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	Modified capitalization-weighted index of 100 stocks
Multiplier	$100				
Exercise Style	American	European	European	European	European
Expiration Months	4 near-term months plus 1 additional month from the March quarterly cycle	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	Up to 3 near-term months plus 3 additional months from the March quarterly cycle
2000 Average Daily Volume	61,530	87,286	14,933	2,998	9,172
2000 Year-End Open Interest	170,183	1,365,342	223,569	21,489	68,108
Trading Hours	Generally 8:30 a.m. - 3:15 p.m. Chicago time. In 2001, the CBOE plans to begin trading certain index options in a pre-opening extended hours session on the CBOEdirect screen-based trading system.				

CBOE Annual Options Volume

Record volume of 326.4 million options in 2000

CBOE trades options on the following:

Equities & LEAPS®
S&P 100 Index® LEAPS
S&P 500 Index® LEAPS
S&P 500 Index Long-Dated Options
FLEX® Options
Equity FLEX
Index FLEX
Dow Jones Industrial Average℠ (DJX) & LEAPS
The Dow 10 Index℠ (MUT)
Dow Jones Internet Commerce Index℠ (ECM)
Dow Jones REIT Index (DJR)
Dow Jones Transportation Average℠ & LEAPS
Dow Jones Utility Average℠ & LEAPS
Morgan Stanley Multinational Company Index℠
Russell 2000® Index & LEAPS
S&P 500/BARRA Growth Index
S&P 500/BARRA Value Index
S&P SmallCap 600 Index
Latin 15 Index™ Index
CBOE Mexico Index & LEAPS
Nikkei 300® Index & LEAPS
NYSE Composite Index®
CBOE Automotive Index
CBOE Computer Software Index
CBOE Gaming Index
CBOE Gold Index
CBOE Internet Index & LEAPS
CBOE Oil Index & LEAPS
CBOE Technology Index & 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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Appendix III: Regulatory Circular on Use of Exchange-traded Options

Trust Banking Circular No. 2 (Revised)
From the Office of the Comptroller of the Currency, Administrator of National Banks, December 19, 1979
Subject: National Bank Trust Department Use of Exchange-traded Put and Call Options

To: Regional Administrators, Senior Trust Offices of National Banks with Trust Powers and National Trust Examiners

This circular establishes policies and procedures that should be followed by national bank trust departments that engage in exchange-traded put and call options transactions ... We have decided that these put and call options are investment tools which are inherently neither prudent nor imprudent. These options are securities registered under the Securities Act of 1933 which are covered by the current issue of the Options Clearing Corporation prospectus. Once it has been determined that the use of options is legally permissible for a specific account, the question of appropriateness is applied to how the option is utilized and what specific strategy is being implemented in the overall portfolio.

Whether the use of a particular investment practice, such as engaging in options transactions, is legally permissible for trust department accounts depends upon the instrument establishing the fiduciary relationship and the applicable rules of investments (local law) governing the specific trust account. This is a standard established by 12 CFR 9.11.

1. Employee benefit trusts which are subject to the Employee Retirement Income Security Act of 1974 (ERISA) are now governed by the rule of prudence established pursuant to that statute, which has superceded the local law of the various states. Under the prudence rule, the relative riskiness of a specific investment or investment course of action does not render such investment or investment course pre se prudent or imprudent. Rather the prudence of each investment decision should be judged with regard to the purpose that it serves in the overall portfolio. ...

The following are minimal guidelines that should be followed by national bank trust departments that engage in exchange-traded option transactions:

1. Prior to engaging in these transactions, the trust department should obtain an opinion of bank counsel concerning the legality of these activities. Wherever possible, the bank should consider amending the governing instrument of each particular account to grant specific authority for the type of option transactions to be engaged in. For collective investment accounts, the activity must be legally permissible for all the participating accounts and the investment fund plan must indicate that the fund may engage in option transactions. Each participating account should be notified of the expanded authority.

2. Specific written policies approved by the board of directors or its designee should be developed prior to engaging in these activities. Policy objectives must be specific enough to define permissible option strategies and should be reviewed at least annually for appropriateness.

3. Recordkeeping systems must be sufficiently detailed to permit internal auditors and bank examiners to determine whether operating personnel have acted in accordance with authorized objectives and that particular transactions were appropriate for the purposes and needs of the particular accounts. The following information, at a minimum, should be recorded for each option transaction:

A. Transaction date
B. Quantity, series, class and type of contract (i.e., 10 April 70 IBM CALLS.)
C. Type of transaction (opening or closing).
D. Market price of particular option and underlying stock.
E. Purpose of opening transaction and corresponding security position, if appropriate.

1. For short covered calls, the specific securities being hedged and the implied returns.

2. For long puts, the specific securities being hedged.

3. For short puts, the form of cash that is being escrowed to make total payment at settlement pursuant to an exercise.

4. For long calls, how the activity is appropriate and beneficial for the particular account (i.e., cash equivalent of aggregate exercise price invested in high interest money market instruments.)

F. The broker executing the transaction.

G. Specific account or accounts for which transaction is made.

4. Specific limitations should be set for each type of activity authorized which at least would conform to the position limits, escrow receipt limits, and other limitations specified in the current prospectus of the Options Clearing Corporation. The aggregate outstanding option positions of the trust department must be monitored to ensure compliance with these limitations.

5. All option contracts should be marked to market for valuation purposes, such as when determining unit values for collective investment funds. Such option contracts should be valued at the last available sales price prior to the time of valuation, unless no sale had occurred that day, in which case the last available bid price for long positions and the last available offer price for short positions should be used. In cases where an option is traded on more than one exchange, the exchange designated by the bank as the primary exchange should be used to determine market price. Gains and losses for options should be accounted for in accordance with section 1234 of the Internal Revenue Code. When trust assets are valued, the option contracts should be presented with the corresponding security positions where possible.

6. Bank trust departments should establish other internal controls, including periodic reports to management and internal audit programs to ensure adherence to bank policy and to prevent unauthorized trading in accounts and other abuses.

A. A central system of monitoring market prices and maturities of option contracts should be established to prevent an unwanted exercise of a short position or an expiration of a long position.

B. Operations personnel must ensure bank compliance with applicable Federal Reserve requirements regarding option contract margin and settlement procedures.

C. Responsibility for settlements of option transactions and reconciliation of internal trading reports with external broker confirmations should be vested with someone other than the person executing the transactions.

Paul M. Homan
Senior Deputy Comptroller for Bank Supervision

Options are not suitable for every investor. For more information consult your investment advisor. Prior to buying and selling options, a person must receive a copy of *Characteristics and Risks of Standardized Options* which is available from The Options Clearing Corporation (OCC) by calling 1-800-OPTIONS, or by writing to the OCC at 440 S. LaSalle, Suite 2400, Chicago, Illinois 60605.

This memorandum has been prepared solely for informational purposes, based upon information generally available to the public from sources believed to be reliable, but no representation or warranty is given with respect to its accuracy or completeness.

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