STOCK PROTECTION FUNDS

The Inverse of Exchange Funds

By Thomas J. Boczar, Esq., LL.M., CPWA°, CFA°, and Elizabeth Ostrander, CFA°

ith the stock market near record levels, many investors own stocks with huge unrealized gains. Yet, the market faces myriad challenges, including intensifying geopolitical distress around the globe, tumbling oil and commodity prices, lethargic economies in Europe, China, and South America, and, in the United States, the threat of higher interest rates and the impact of a soaring dollar.

Given the current investment climate, it would seem judicious to take some chips off the table. Still, with the federal capital gains tax rate now nearly 60-percent higher than its recent low and many states boosting tax rates as well, many investors are stunned when they estimate the all-in tax expense of selling their stock.

Long-term capital gains (LTCG) currently are taxed at a 20-percent federal rate and are subject to the 3.8-percent federal Medicare surtax. The Tax Foundation determined that 41 of our 50 states impose a tax on capital gains that averages 5.1 percent. Consequently, the average combined tax rate on LTCG is almost 29 percent (i.e., 20-percent federal rate, plus 3.8-percent Medicare surtax, plus average 5.1-percent state tax). The highest combined tax rate on LTCG is more than 37 percent and is imposed on California residents (i.e., 23.8-percent federal rate plus 13.3-percent California state tax).

The fact is that owners of low-cost-basis stock positions are now subject to a hefty tax bill upon realization of gains. Many wealthy individuals and families have amassed their fortunes, now embodied by their concentrated stock positions, through multiple generations of hard work, frugality, and measured business risks. That a sale would elicit an immediate income tax expense of the magnitude described above often is unpalatable.

Moreover, in many cases the shares received by an investor's estate or beneficiary will qualify for an adjusted tax-cost-basis equal to the fair market value (i.e., market price) of the shares on the investor's date of death. This step-up in basis offers investors both an opportunity and incentive to eliminate the capital gains tax on their unrealized gains.

With the estate-tax exemption in 2015 at nearly \$11 million for a married couple, it makes sense for investors to ask, "Is it more advantageous to sell now and incur a sizeable capital gains tax—or wait until death to avoid paying the capital gains tax and possibly the estate tax as well?"

Irrespective of tax considerations, investors sometimes are disinclined to sell their highly appreciated stock positions for a variety of reasons. Some believe their stock will further appreciate. Others find the dividend yield on their stock attractive relative to current fixed-income yields. Some have a powerful emotional connection to their stock due to past employment with the company or the means by which they acquired the shares in the first place (e.g., from the sale of a family business to a publicly traded company in exchange for stock or inherited from a loved one). Yet others must confront restrictions on selling that are imposed by securities laws/regulations or contractual provisions (i.e., post-initial public offering lock-up agreement, merger agreement, or employment contract).

Protecting Highly Appreciated Stock Seems Prudent and Timely

If an investor decides to continue holding highly appreciated shares, the owner ideally would like to accomplish three goals:

- 1. Preserve unrealized gains,
- 2. Defer the capital gains tax (and possibly eliminate it by taking advantage of the step-up in basis), and
- Retain all future price appreciation and dividends.

However, uncovering a long-term solution that accomplishes these objectives in a cost-effective and tax-efficient manner has proved elusive for investors.

Conventional Methods and Current

Equity Derivatives Used Sparingly

For years, investors have used equity derivatives (i.e., puts, calls, collars, and forwards) as their primary tools to reduce companyspecific risk and continuously protect a stock position in a long-term, strategic manner. Unfortunately, these tools are now too often prohibitively expensive (especially when used on a long-term basis) due to the convergence of several factors, including historically low interest rates, unfavorable volatility skew (i.e., puts are considerably more expensive relative to calls), and the capital allocation ramifications of Dodd-Frank on

Consequently, equity derivative strategies, if and when employed, typically are utilized in a short-term, tactical manner during periods of time when it's believed the stock price is at risk of a significant decline. Such tactical risk mitigation can be cost-effective only if the

over-the-counter derivative dealers.

investor is able to correctly time the entry and exit of the strategy; in practice, most investors find this difficult to accomplish.

Moreover, investors find it problematic to make steady and consistent use of equity derivatives to manage single-stock risk for other reasons. Equity derivatives are, by their nature, tax-inefficient in that, generally, gains are taxed as short-term capital gains, losses are not currently deductible, and any dividends received while a stock is being protected are taxed as ordinary income instead of LTCG.1 The shares must be pledged to, and held in custody with, the dealer, and therefore can't be sold until the derivative matures or is terminated. The investor is exposed to the credit risk of the dealer counterparty. Derivatives are complex financial instruments and can be difficult for investors to understand. Finally, the pricing of over-the-counter derivatives, which often are utilized to enhance taxefficiency and achieve greater customization, is inherently not a fully transparent process.

Exchange Funds (aka Swap Funds) Experiencing a Renaissance

Investors owning concentrated stock positions have used exchange funds, often referred to as swap funds, since their creation in the 1960s.

Immediately after the financial crisis, there was an abrupt and steep drop-off in the use of exchange funds by investors for a period of a few years. However, as the market recovered, investors once again began to embrace exchange funds. Information on the size of the market for exchange funds is difficult to access, but one researcher estimated that as of 2010 the market for swap funds exceeded \$30 billion (Herzig 2010).

Exchange funds continue to experience increasing asset inflows, with at least one large financial services firm recently sponsoring a new fund that reportedly is proving popular with investors holding concentrated positions, and other funds rumored to be coming to market in the near future. The growing level of interest in exchange funds among investors is likely due in large part to the continued strength of the stock market,

the high tax cost of selling shares, and the continued ugliness of derivative pricing.

Structurally, an exchange fund is a partnership or similar entity (i.e., a fund) whose partners each contribute low-cost-basis shares into the fund. Before the contribution, each partner owns shares of stock of a different company. After the contribution, each partner owns a pro-rata interest in the fund, which now holds a diversified portfolio of stocks in a variety of industries.

An exchange fund enables the partners to mutualize, and therefore substantially reduce, single-stock risk. The partners obtain the benefit of diversification similar to that achieved through an investment in a mutual fund or exchange-traded fund. Economically, it's as if each partner sold his shares tax-free and immediately reinvested the proceeds into the fund.² Going forward, each partner is exposed to the upside potential and downside risk associated with the portfolio that the fund sponsor has constructed, rather than solely to the stock that was contributed.³

If an investor dies while invested in the fund, the estate or beneficiary of the deceased receives the fund interest with a stepped-up basis. If the estate or beneficiary of the deceased subsequently redeems its fund interest, it will receive securities with the same tax cost basis that the fund interest possessed, which has been stepped-up to fair market value. Therefore, if a partner contributes highly appreciated shares to an exchange fund with an unlimited life, the partner can have the reasonable expectation that the unrealized gains on the contributed shares will be eliminated at death because of the step-up in basis of the fund interest.

What if an investor wishes to retain all of the upside potential of a concentrated stock position and mutualize only the downside risk? Is that possible?

Stock Protection Funds: The Inverse of Exchange Funds

Stock protection funds, sometimes referred to as stock protection trusts (protection funds), are a fairly recent development.⁴

Protection funds allow investors to retain ownership of single-stock positions to benefit from continued price appreciation and dividend growth, yet simultaneously attain the benefit of diversification and reduction of downside risk analogous to that achieved through exchange funds. Importantly, protection funds permit investors to mitigate specific company risk over a much longer time period (i.e., five years or more) and in a more cost-effective and tax-efficient fashion than is possible using equity derivatives.

Conceptually, a protection fund can perhaps best be thought of as the inverse of an exchange fund. That is, investors who embrace this technique would like to continue to own (rather than dispose of) their stock positions. Participating investors, who each own a different stock in a different industry, contribute a modest amount of cash or "premium" (i.e., not shares) into a fund that is conservatively invested and used to reimburse the participants in the event of a large decrease in the value of the stock after a period of years.

Exchange fund. An exchange fund can prove useful for investors who own highly appreciated stock, wish to exit completely from their positions in a tax-efficient manner, and achieve diversification in a portfolio of other publicly traded stocks. This may be appealing to investors who have turned bearish on the highly appreciated stock positions they own.

Protection fund. Conversely, a protection fund can be beneficial for investors who hold highly appreciated shares and would like to continue to own their positions to capture future appreciation and dividend growth, but would like to safeguard unrealized gains cost-effectively and tax-efficiently. This may be desirable to investors who remain bullish on the highly appreciated stocks they own. Figures 1 and 2 compare protection funds to exchange funds.

The foundation of protection funds is rooted in the time-tested principles of modern portfolio theory (MPT) and risk pooling/insurance. By integrating these concepts, it is possible for investors to diversify or mutualize—and therefore

substantially diminish—a stock's downside risk, while retaining its full upside potential and all dividend income.

According to MPT, as individual stocks are added to a portfolio, the average covariance of the portfolio will decline. There is considerable

Figure 1: Exchange Fund vs. Protection Fund Stock

- · A diverse group of investors with concentrated stock positions each contribute their shares in exchange for an ownership interest in the fund proportionate to the value of the shares he/she contributed.
- Upon leaving the exchange fund (after a minimum of seven years), each investor receives a diverse basket of individual stocks.
- · A diverse group of investors with concentrated stock positions each contribute a cash "premium" in exchange for an ownership interest in the fund.
- · The cash pool is managed conservatively for the term of the fund, after which time it is used to reimburse investors whose positions have incurred losses (on a total return basis)
- · Excess cash is distributed equally among those investors who have not incurred any losses.

debate over the number of stocks necessary to achieve adequate diversification (see, for example, Evans and Archer 1968; Tole 1982; Statman 1987; Campbell et al. 2001). Most agree, however, that about 20 disparate and equal-sized stocks are necessary to maximize the benefits of diversification (i.e., reach the point of diminishing returns), meaning that increasing the number of stock holdings to more than 20 does not result in any significant further risk reduction.5

Over time there will be substantial dispersion in individual stock performance on a total return basis. Some stocks in the portfolio will outperform (achieving large gains), most will perform in-line with the stock market, and some will underperform (losing substantial value). After a period of years, the distribution of total returns of the 20 stocks in the portfolio will approximate a normal curve, with the big winners reflected on the right tail, the in-line performers in the middle of the curve, and the big losers on the left tail. Protection funds combine these key elements of MPT with the notion of a risk-sharing pool to truncate or eliminate left-tail risk.

The Mechanics: How Protection Funds Work

Figure 3 illustrates how protection funds work. In this hypothetical example, 20 investors, each owning a different stock in a different industry, contribute cash (i.e., not their shares) equal to 10 percent of the value of the positions they are protecting (i.e., a premium of 2 percent per annum for five years, contributed up front) into a protection fund that will terminate in five years. The cash is invested in U.S. government and high-grade corporate bonds that mature on or near the same date the protection fund terminates. Upon termination, the cash is distributed to the investors whose stocks have lost value on a total return basis. Losses are paid until the cash is depleted. If, as in our example, the cash exceeds the total amount of all losses, all losses will have been eliminated, and the excess cash is returned equally to the investors whose stocks did not incur any losses. If, on the other hand, the value of aggregate losses (i.e., claims) exceeds that of the cash pool, large losses are substantially reduced.

More precisely, upon termination of the protection fund, the largest loss incurred among the group of 20 investors' individual stocks is first identified. Using funds in the cash pool, this loss is reduced (i.e., reimbursed) to the level of the second-largest loss that was incurred among the other 19 stocks. Next, these two losses are reduced to the level of the third-largest loss among the other 18 stocks, and so on. This process continues until either all losses have been reimbursed or the cash pool has been depleted. The largest remaining loss at this point defines what is referred to as the "maximum stock loss" for all investors who have incurred losses (stated as a percentage of the amount of protected value).

To illustrate, if the maximum stock loss was calculated to be 15 percent, an investor whose stock lost 80 percent of its value would receive reimbursement from the cash pool reducing that loss from 80 percent to 15 percent. If the maximum stock loss was 0 percent, the investor's stock loss of 80 percent would be fully reimbursed

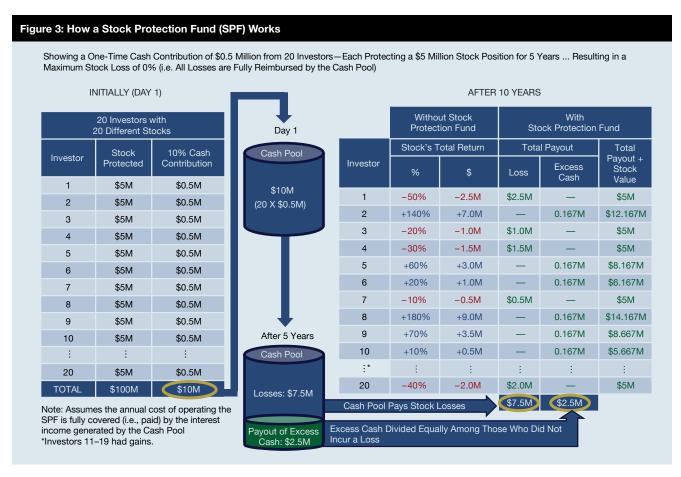
Figure 2: Exchange Fund vs. Protection Fund -A Nontraditional Approach:

Risk

Exchange Fund . Dispose of concentrated position · Pool sharaes with other investors who wish to exit from their concentrated positions · Exchange shares for a pro-rata ownership interest in the fund · Diversify into a portfolio with upside potential · Shares are locked up for seven years for tax purposes

Protection Fund

- Remain invested in concentrate ed position
- · Pool cash with other investors who wish to preserve the value of their concentrated positions
 - · Protect against a decline in the value of investors' concentrated positions by mutualizing their downside risk
- . Retain 100% upside potential of stock including all future appreciation and dividends
- . Shares can be sold anytime as they are unencumbered (only cash contribution is "locked up" for term of the fund)



by the cash pool. In our example, the maximum stock loss is 0 percent.

Flexibility

Protection funds can be custom-built to respond to the specific needs of investors. For example, the cash investment might be as low as 5 percent to shield solely against catastrophic stock losses caused by lowfrequency/high-severity events; in this case a protection fund might reimburse investors for losses that exceed a certain threshold such as 50 percent (i.e., to the extent the stock lost more than 50 percent during the term of the protection fund). A cash investment of 10 percent (i.e., a premium of 2 percent per annum over five-year term paid up front), as both back-testing and actual performance results demonstrate, provides more robust protection against stock losses. Protection funds can be for a term that is five years or longer; a minimum term of five years is necessary to permit the dispersion of total returns among the 20 stocks protected by the fund.

Table 1 depicts the results of extensive, historical back-testing of the protection fund methodology. The following assumptions were used:

- Twenty S&P 500 stocks make up each protection fund
- The stocks are randomly selected
- Each of the 20 stocks is in a different industry
- The amount of protected stock value is the same for each investor
- The term of each protection fund is five years
- The up-front cash contribution is equal to 10 percent (i.e., "premium" of 2 percent per annum for five-year term) of protected value
- The period tested is 1972–2014

For stocks held during a five-year period, the use of protection funds reduced the average stock loss from 35 percent to 6 percent, amounting to a more than 80-percent reduction in downside risk. The risk of a catastrophic stock loss (defined as a loss of

60 percent or more) was virtually eliminated, and the risk of a loss of 30 percent or more was reduced by 85 percent, from a frequency of 11.1 percent to just 1.6 percent.

Table 2 shows the results of additional historical back-testing. All assumptions remain constant, except the term of each protection fund is assumed to be 10 years. Here an up-front cash contribution equal to 10 percent (i.e., "premium" of 1 percent per annum for 10-year term) of protected value is assumed.

For stocks held during a 10-year period, the use of protection funds reduced the average stock loss from 47 percent to 6 percent, a more than 85-percent reduction in downside risk. The risk of a catastrophic stock loss greater than 60 percent was again virtually eliminated, from a frequency of 5.6 percent to 0.0 percent. The risk of a loss greater than 30 percent was reduced from a frequency of 10 percent to just 1.8 percent, a reduction of more than 80 percent.

Table 1: Historical Back-Testing of Stock Protection Funds (SPFs)

Premium of 2 percent per annum for five-year term paid up front Based on 7.6 million data points - 380,000 random computer simulations using 1972-2014 S&P 500 database (10,000 simulations per five-year period and 20 stocks per simulation)

	Percentage of Investo	Percentage of Investors Losing 60% or More		Percentage of Investors Losing 30% or More		Average Size of Investor's Loss (%)	
5-Year Period	Without SPF	With SPF*	Without SPF	With SPF*	Without SPF	With SPF*	
1972–1977	5.8	0	21.5	1.0	-36	-11	
1973–1978	2.4	0	7.4	0.0	-28	-1	
1974–1979	0.2	0	1.1	0	-19	0	
1975–1980	0.2	0	3.3	0	-22	0	
1976–1981	2.1	0	6.8	0.0	–27	-1	
1977–1982	1.0	0	2.6	0.0	-29	0	
1978–1983	0.4	0	1.7	0	-26	0	
1979–1984	1.7	0	5.3	0.0	-32	0	
1980–1985	3.3	0	8.2	0.1	-35	-2	
1981–1986	3.9	0	7.9	0.2	-40	-2	
1982–1987	3.3	0	6.7	0.0	-35	-2	
1983–1988	3.8	0	8.2	0.2	-36	-3	
1984–1989	3.7	0	7.6	0.1	-42	-2	
1985–1990	6.7	0	13.9	1.2	-42	-9	
1986–1991	5.0	0.0	10.5	0.3	-37	-4	
1987–1992	4.7	0	9.7	0.2	-40	-3	
1988–1993	4.3	0	8.0	0.1	-40	-2	
1989–1994	4.1	0	8.9	0.2	-32	-3	
1990–1995	1.3	0	5.3	0.0	-30	0	
1991–1996	2.1	0	6.5	0.0	-33	-1	
1992–1997	1.9	0	4.6	0.0	-32	-1	
1993–1998	1.7	0	6.8	0.0	-34	-1	
1994–1999	2.4	0	7.6	0.0	-37	-2	
1995–2000	6.9	0	13.1	1.0	-43	-7	
1996–2001	4.9	0	13.8	0.8	-37	-7	
1997–2002	10.1	0.0	23.5	7.0	-38	-17	
1998–2003	8.5	0.0	17.7	3.2	-41	-12	
1999–2004	10.8	0	20.5	4.8	-43	-15	
2000–2005	9.2	0.0	19.3	4.2	-42	-14	
2001–2006	5.1	0	12.1	0.3	-36	-5	
2002–2007	1.3	0	6.2	0.0	-30	-1	
2003–2008	16.4	0.1	33.8	21.8	-47	-27	
2004–2009	10.6	0.0	21.1	5.8	-39	-16	
2005–2010	8.8	0	18.6	2.8	-38	-12	
2006–2011	5.8	0	21.7	1.0	-36	-11	
2007–2012	9.2	0	24.7	5.6	-39	-16	
2008–2013	0.0	0	1.7	0	-22	0	
2009–2014	1.8	0	3.7	0.0	-37	0	
Average of All 5-Year Periods	4.6	0.0	11.1	1.6	-35	-6	

^{* 0.0} indicates a value that rounds to less than 0.1. Performance is gross of fees and expenses.

Table 2: Historical Back-Testing of Stock Protection Funds (SPFs)

Premium of 1 percent per annum for 10-year term paid up front Based on 6.6 million data points—330,000 random computer simulations using 1972–2014 S&P 500 database (10,000 simulations per 10-year period and 20 stocks per simulation)

	Percentage of Investors Losing 60% or More		Percentage of Investors Losing 30% or More		Average Size of Investor's Loss (%)		
10-Year Period	Without SPF	With SPF*	Without SPF	With SPF*	Without SPF	With SPF*	
1972–1982	4.8	0	9.4	0.1	-40	-3	
1973–1983	2.0	0	4.0	0.0	-41	0	
1974–1984	0.6	0	1.7	0	-41	0	
1975–1985	1.1	0	2.8	0.0	-42	0	
1976–1986	2.4	0	5.7	0.0	-45	-1	
1977–1987	2.5	0	4.8	0.0	-50	-1	
1978–1988	2.7	0	3.9	0.0	-51	-1	
1979–1989	2.3	0	5.0	0.0	-45	-1	
1980–1990	5.7	0	8.4	0.4	-48	- 5	
1981–1991	5.0	0	8.1	0.3	-47	-4	
1982–1992	4.3	0	8.3	0.2	-48	-3	
1983–1993	4.9	0	8.8	0.3	-47	-4	
1984–1994	5.0	0	7.4	0.3	- 52	-4	
1985–1995	4.6	0.0	7.3	0.3	- 51	-4	
1986–1996	4.6	0	6.8	0.2	-49	-3	
1987–1997	3.8	0	7.4	0.1	- 50	-3	
1988–1998	4.1	0.0	8.4	0.2	–47	-4	
1989–1999	4.1	0	9.6	0.3	-43	-4	
1990–2000	5.5	0	9.9	0.7	-53	-6	
1991–2001	5.6	0.0	10.0	0.8	-48	-6	
1992–2002	8.2	0.0	13.5	2.4	-49	-11	
1993–2003	5.5	0	9.0	0.8	-49	-6	
1994–2004	4.3	0.0	6.9	0.3	- 51	-4	
1995–2005	4.9	0	8.3	0.6	- 50	-5	
1996–2006	4.5	0.0	8.6	0.4	-48	-4	
1997–2007	5.7	0	13.0	0.8	-40	- 7	
1998–2008	16.4	0.3	28.4	18.4	- 51	– 27	
1999–2009	15.2	0.2	25.4	14.0	- 51	–25	
2000–2010	13.4	0.0	22.4	8.9	-48	-20	
2001–2011	12.8	0.0	21.9	8.0	-47	-19	
2002–2012	4.7	0	11.1	0.3	-42	-4	
2003–2013	5.7	0	12.6	0.7	-45	-7	
2004–2014	7.2	0	12.1	1.0	-48	-8	
Average of All 10-Year Periods	5.6	0.0	10.0	1.8	-47	-6	
* 0.0 indicates a value that rounds to less than 0.1. Performance is gross of fees and expenses.							

Figure 4 illustrates the results of the back-testing with and without the use of protection funds. The test results demonstrate the efficacy of protection funds in substantially reducing both the frequency and magnitude of losses associated with single-stock positions (i.e., mitigating left-

tail risk), and validate their utility as a longterm risk management tool.

Protection Fund Successfully Deployed Throughout the Financial Crisis

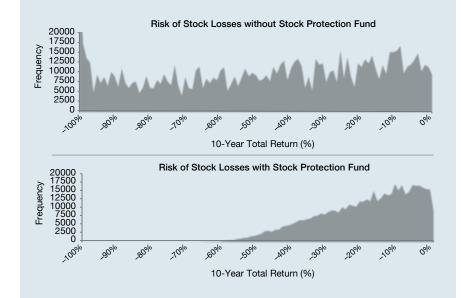
On June 1, 2006, a protection fund was formed with a 10-percent cash contribution

and a five-year term (i.e., premium of 2 percent per annum for five-year term paid up front), protecting 20 investors who owned and wished to protect stock positions in 20 different industries of equal size. On June 1, 2006, the Dow Jones Industrial Average (DJIA) was 11,260 and the S&P 500

Figure 4: Risk Transformation

Stock protection fund historical back-testing, with a one-time cash contribution of 10% of the stock position for a term of 10 years.

Based on 6 million data points - 330,000 random computer simulations using 1972-2014 S&P 500 database (10,000 simulations per 10-year period and 20 stocks per simulation).



was 1,286. On June 1, 2011, at the protection fund's termination date, the DJIA was 12,290 and the S&P 500 was 1,315. Therefore, a protection fund was deployed throughout the entire financial crisis.

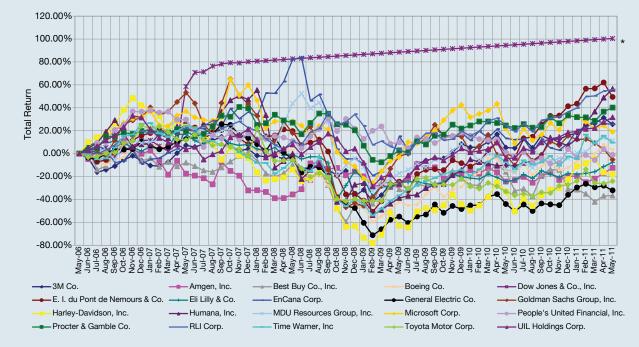
Figure 5 depicts the dispersion in individual stock performance that occurred among the 20 stocks protected during the five-year period, while table 3 displays the actual performance results.

The maximum stock loss was 0 percent, meaning that the cash pool eliminated (i.e., reimbursed) all stock losses. Of the cash contribution (or premium), 31 percent ultimately was returned to the investors. Therefore, the all-in cost of the stock protection (based on the original amount of protected stock value) was 6.9 percent, or just 1.38 percent per annum when amortized over the five-year period.

The protection fund's deployment during the financial crisis delivered stock protection

Figure 5: Individual Stock Performance throughout Actual Stock Protection Fund

This figure demonstrates the large dispersion in stock performance among all 20 stocks protected by a stock protection fund throughout the entire financial crisis.



Note: Dow Jones & Co., Inc. was acquired in December 2007 with proceeds assumed to realize the yield on U.S. Government bonds through to maturity of the SPF (i.e., June 1, 2011)

that was effective, and that protection was provided at a relatively modest cost.

How Protection Funds Compare to Equity Derivatives

Figure 6 illustrates that protection funds compare favorably to equity derivatives.

Cost Effectiveness

Protection funds cost much less than protection for a similar term using equity derivatives, and investors using protection funds need not forfeit any portion of the upside potential of their stocks, including dividends. The affordability of protection funds empowers investors who own concentrated stock positions to embrace a long–term, strategic approach to continuously mitigate their stock's downside risk, yet retain 100 percent of any further appreciation as well as all dividends.

Tax Efficiency

Protection funds are more tax-efficient, and expose investors to less tax risk, than equity derivatives.

With a protection fund, a statutory constructive sale isn't triggered because the investors remain entitled to all the upside potential of their stocks, including appreciation and dividends.⁶ A common law constructive sale isn't triggered because the investors preserve all incidents of ownership of their stock positions; that is, investors retain all future appreciation, dividends, and voting rights, and investors can sell or dispose of shares at any time (because a protection fund doesn't require that a pledge, lien, or encumbrance be placed on the shares).

The straddle rules do not apply because the value of an investor's stock and its ownership interest in a protection fund will not "vary inversely." Instead, the value of an investor's ownership interest in a protection fund depends mainly on (1) the change in value of that investor's stock and (2) the change in value of the other 19 investors' stocks; and to a much lesser extent, (3) the change in value of the cash pool. Therefore, an investment in a protection fund is economically very similar to

Table 3: Actual Performance Results of Five-Year Stock Protection Fund							
	Stock's Total Return						
Stock Protected	Without SPF	With SPF	Loss Elimination with SPF				
Best Buy Co., Inc.	-36.7	0	36.7				
General Electric Co.	-32.1	0	32.1				
Toyota Motor Corp.	-24.2	0	24.2				
Harley-Davidson, Inc.	-18.2	0	18.2				
Amgen, Inc.	-12.5	0	12.5				
Eli Lilly & Co.	-7.7	0	7.7				
Goldman Sachs Group, Inc.	-5.3	0	5.3				
People's United Financial, Inc.	-1.1	0	1.1				
Boeing Co.	3.3	3.3	N/A				
Time Warner, Inc.	9.5	9.5	N/A				
MDU Resources Group, Inc.	11.4	11.4	N/A				
Microsoft Corp.	18.9	18.9	N/A				
3M Co.	25.5	25.5	N/A				
EnCana Corp.	25.6	25.6	N/A				
UIL Holdings Corp.	31.7	31.7	N/A				
Procter & Gamble Co.	40.2	40.2	N/A				
E. I. du Pont de Nemours & Co.	49.4	49.4	N/A				
RLI Corp.	55.8	55.8	N/A				
Humana, Inc.	56.5	56.5	N/A				
Dow Jones & Co., Inc.	100.4	100.4	N/A				
Maximum Stock Loss: 0 percent; Actual Cost of Protection: 1.38 percent per annum							

Figure 6: Single-Stock Concentration Risk Management Strategy Comparison Matrix Keep 100% of Stock's Upside High Tax 5+ Year Horizon No Credit Low Low Complexity Transparency Efficient Stock Protection Fund Put Ontion Collar Prepaid Variable Forward Exchange Fund Yes No

an investment in a portfolio of 20 unrelated stocks, with the risk reduction due to the change in value of each of the individual stocks in the portfolio.

As a rule, dividends must satisfy certain holding period rules to qualify for long-

term capital gains treatment.⁸ If dividends otherwise satisfy the rules and are "qualified dividend income," an investor's investment in a protection fund will not cause the loss of qualified dividend status. Therefore, dividends received will be taxed at the long-term capital gains rate.

Upon liquidation of a protection fund, if the amount of cash distributed to an investor exceeds its tax cost basis (i.e., the original cash contribution to the protection fund), the gain is treated as LTCG. If the amount of cash distributed is less than the tax cost basis, the loss will be treated as a currently deductible long-term capital loss.9

Other Considerations

Unlike equity derivatives, the shares being protected can be sold at any time because they need not be pledged or encumbered in any manner whatsoever. The shares can be held in custody wherever the owner selects. There is no dealer counterparty credit risk. Protection funds are easy to understand and fully transparent; their valuation can be viewed in real time during any business day.

Private Company Owners Can Also Use Protection Funds

The owners of substantial private companies—including families and private equity groups-can use a protection fund to guard against specific company risk until a liquidity event occurs. The protection fund methodology also can be used to affordably mitigate the downside price risk of other highly appreciated assets such as real estate and art.

Fiduciary Considerations for Financial Advisors

Under the prudent investor rule, which has been adopted by most states, fiduciaries have an affirmative duty to mitigate undue stock concentration risk.10 In addition. fiduciaries (as well as financial advisors who hold themselves out as experts) are in many instances required to be capable of evaluating and implementing single-stock risk mitigation strategies that are available in the marketplace.11 Put another way, this evolving duty requires that fiduciaries consider risk reduction strategies such as those described herein as a possible alternative to an outright sale or continued holding of the concentrated position (see Crawford 1995; Borkus 2001; Miller 2002; Boczar 2007).

Summary

A protection fund is a new tool that investors can use to help manage single-stock

concentration risk. Protection funds are economically the inverse of exchange funds. An exchange fund should be considered when an investor is bearish on an appreciated stock and seeks to completely dispose of the position and achieve immediate diversification in a portfolio of stocks, without triggering a current taxable event. Conversely, a protection fund should be considered when an investor remains bullish on a highly appreciated stock and wishes to continue owning the stock to capture future appreciation and dividend growth, while protecting unrealized gains in a cost-effective and taxefficient manner.

Thomas J. Boczar, Esq., LL.M., CPWA®, CFA®, is chief executive officer at Intelligent Edge Advisors in New York. He earned an LL.M. in taxation from New York University School of Law and JD, MBA, and MPAcc degrees from the University of Miami. Contact him at tboczar@intelligent-edge.com.

Elizabeth Ostrander, CFA®, is a managing director at Intelligent Edge Advisors in New York. She earned a BA from Boston College. Contact her at eostrander@intelligent-edge.com.

Endnotes

- 1. These draconian tax results are achieved because, in almost all instances, the stock position, when combined with the derivative hedging instrument, will be deemed a "straddle" under Code Section 1092; further, the dividend holding period requirements of Code Section 1(h)(11)(B)(iii)(I) will not be satisfied.
- The contribution of shares to an exchange fund does not trigger a taxable event, and each partner's basis in its fund interest is the same as its basis in the shares that were contributed (i.e., a carryover basis). For tax purposes, each partner must remain invested in the fund for at least seven years. After that, each partner typically has the right to either redeem its fund interest (and in turn receive a basket of securities equal in value to its fund interest) or continue its investment in the fund. If a partner elects to redeem its fund interest, the basket of securities received retains the basis of the shares that were contributed to the fund (i.e., carryover basis).
- 3. It should be noted that for tax purposes, at inception of the fund, no more than 80 percent of the fund's assets can consist of stocks, and at least 20 percent must be invested in "not readily marketable" securities. Most exchange fund sponsors make various forms of commercial real estate investments to satisfy this requirement, which typically are funded primarily through debt.
- 4. The protection fund methodology described here is protected by a portfolio of U.S. patents: Nos. 7,720,736; 7,739,177; 7,987,133; 8,229,827; and 8,306,897.
- Reilly and Brown (2012, 213-214) summarizes the relevant research studies and findings.
- The legislative history to the constructive sale rules of Code Section 1259-more specifically the Senate

- Finance Committee Report (pages 126-127) and the House Ways and Means Committee Report (identical language)-states that transactions will be treated as constructive sales only if they have the effect of substantially eliminating both the investor's risk of loss and opportunity for gain with respect to the underlying stock.
- See U.S. Treas. Regs. Section 1.246-5(b)(2). See also Tax Management Portfolio (Transactions on Stock, Securities and Other Financial Instruments), 184-4th, page A-32(5) stating: "In general, non-technical terms, the essential features of a straddle are: 1) the positions are valued by some type of market on or through which they may be liquidated at any time, and 2) market forces resulting in any change in value of one position will almost always result in an inverse change in value of the offsetting position although not necessarily in the same amount.
- See Code Section 1 (h)(11)(B)(iii)(I).
- The protection fund elects to be treated as an association taxable as a corporation. Protection fund investors are treated as shareholders and their protection fund ownership interests as stock. On the termination date, a complete liquidation of the corporation occurs under Code Section 331. Therefore, the cash distribution will be treated as the proceeds of a purchase of the shareholder's stock by the corporation, and will qualify for capital gain or loss treatment, provided that the stock of the liquidating corporation is a capital asset in the hands of the shareholder.
- 10. See Uniform Prudent Investor Act. Section 3 (1995) and comment to Section 3. See also Restatement (3rd) of Trusts, Section 227.
- 11. See Levy v. Bessemer Trust Co., 197 WL 431079, S.D.N.Y., July 30, 1997. See also Brane v. Roth, 590 N.E.2nd 587 (Ind. Ct. App. 1992).

References

- Boczar, Thomas J. 2007. Mitigating the Legal Duties of Fiduciaries and Financial Advisors to Manage Stock Concentration Risk - Conceptualizing and Implementing a Best Practices Framework. Journal of Wealth Management 10, no. 1 (summer): 16-34.
- Borkus, Randall A. 2001. A Trust Fiduciary's Duty to Implement Capital Preservation Strategies Using Financial Derivative Techniques. Real Property, Probate and Trust Journal 36, no. 1 (spring): 127-166.
- Campbell, John Y., Martin Lettau, Burton G. Malkiel, and Yexiao Xu. 2001. Have Individual Stocks Become More Volatile? An Empirical Exploration of Idiosyncratic Risk. Journal of Finance 56, no. 1 (February): 1-43.
- Crawford, George. 1995. A Fiduciary Duty to Use Derivatives? Stanford Journal of Law, Business & Finance 1, no. 2 (spring): 307-332.
- Evans, John L., and Stephen H. Archer. 1968. Diversification and the Reduction of Dispersion: An Empirical Analysis. Journal of Finance 23, no. 5 (December): 761-767.
- Herzig, David. 2010. Am I the Only Person Paying Taxes? The Largest Tax Loophole for the Rich - Exchange Funds (February 5). Michigan State Law Review. Forthcoming: Valparaiso University Legal Studies Research Paper No. 10-01, at p. 46, http://papers. ssrn.com/sol3/papers.cfm?abstract id=1548669.
- Miller, Mark A. 2002. Protecting Appreciation in Taxable Investment Securities and Portfolios with Hedging Strategies. Journal of Wealth Management 5, no. 2 (fall): 31-48.
- Reilly, Frank, and Keith Brown. 2012. Investment Analysis and Portfolio Management (10th edition). Mason, OH: South-Western Cengage Learning.
- Statman, Meir. 1987. How Many Stocks Make a Diversified Portfolio? Journal of Financial and Quantitative Analysis 22, no. 3 (September): 353-363.
- Tole, Thomas M. 1982. You Can't Diversify Without Diversifying. Journal of Portfolio Management 8, no. 2 (winter): 5-11.

