

The Case for Objectives-Based Investing: Building a Defensively Oriented Portfolio

Contents

Cracks in the Traditional Framework to Building Portfolios.....	2
The Four Factors	2
Case Study	4
Case Study Findings	8
Objectives-Based Investing.....	9
Case Study—Revisited.....	9
Conclusion	19
About the Author	20
Appendix	21

There are many methods of building an investment strategy designed to meet an investor’s future needs. Many investment professionals use some form of an efficient frontier model to develop the strategic asset allocation for their clients. These efficient frontier models seek to strike a balance between the highest possible return for the lowest level of risk. Depending on an investor’s risk tolerance, he or she is assigned a particular mix of investments as the optimal choice.

While Lockwood Advisors, Inc. (Lockwood) believes that strategic asset allocation based on an efficient frontier framework has conceptual merit, we do not believe that this should necessarily be the starting point in the analysis, as the inputs are typically biased toward the investment professional’s beliefs regarding expected returns and risks in certain asset classes. In our opinion, regardless of whether the investor is an individual or a large institution, the starting point for portfolio construction should be a definition of the investor’s objectives. In terms of asset class selection (the mix of asset classes) and investment options selected (i.e., mutual funds, exchange-traded funds [ETFs], separately managed accounts [SMAs], etc.), we believe that the overriding focus should be on meeting the objectives of the investor from a return, risk, time horizon and liquidity perspective.

A Note on the Analysis. In order to preserve the integrity of the analysis, this paper is based on the time period ended December 31, 2007. The original analysis in this paper was conducted in early 2008 based on 2007 year-end data. This analysis was part of the development of Lockwood’s objectives-based models in Lockwood Advisor*Flex* Portfolios™. Given the extraordinary market environment of 2008, we felt it was important to update the analysis through December 31, 2008; this information is available in the Appendix. We believe that this additional analysis should demonstrate that the objectives-based approach is still supported over that time period as well.

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Cracks in the Traditional Framework to Building Portfolios

The efficient frontier framework formally dates back to 1952, when Harry Markowitz introduced the concept in the *Journal of Finance*. Despite its simplicity, the concept was perhaps one of the most profound developments in modern finance, and it is likely the most widely used tool to develop portfolios by investment professionals. The basic concept is that there are many combinations of assets that can be used in designing a portfolio; however, based on the combination of risk, return and covariance, an optimal set of portfolios, known as the efficient frontier, can be identified. Any portfolio combination that lies below the efficient frontier is considered sub-optimal, as there exists either a portfolio on the frontier that offers higher return for that given level of risk or a portfolio that offers lower risk for that given level of return. The practice of assigning a portfolio to an investor based primarily on where the portfolio falls along an efficient frontier may not necessarily help achieve the investor's objectives. There are other key considerations outside of return, risk and covariance that may impact the efficacy of a portfolio.

Of the many considerations that go into developing a portfolio, we believe that there are four critical factors:

1. Model assumptions (i.e., expected returns, risk and correlation)
2. Liquidity
3. Time horizon
4. Investment option selection

A traditional approach to portfolio construction may gloss over these details when using mean-variance optimization, also known as modern portfolio theory, as the primary method of portfolio construction. In the following section, we discuss how the traditional framework for building portfolios may fall short in these critical areas.

The Four Factors

Model Assumptions

Model assumptions are critical in determining what the final portfolio will look like. Traditional models are typically based on historical risk and return figures for asset classes, and make an implicit assumption that future results will be similar, which often is not the case. Evidence suggests that the risk side of the equation may tend to be stable over time; however, the return assumptions can vary widely from one period to the next. For example, over the 10 years ended December 31, 2007, bonds outperformed stocks at less than one-third of the level of risk, as measured by standard deviation.¹

¹ Bonds as defined by the Barclays Capital U.S. Aggregate Bond Index; stocks as defined by the S&P 500 Index.

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Exhibit 1. Return and Risk Statistics for Stocks and Bonds

10-Year Return and Risk Ended 12/31/2007		
Asset Class ¹	Return	Risk (Standard Deviation)
U.S. Equity	5.9%	14.7%
U.S. Fixed Income	6.0%	3.5%

Source: Zephyr StyleADVISOR

Note: Past performance is not a guarantee of future results. Indices are not available for direct investment.

Based on these 10 years of data, most optimization modeling programs would likely overallocate to bonds relative to stocks. Bonds have recently benefited from one of the largest secular interest rate declines in the last 60 years. With yields at such low levels, bonds may not have a repeat performance for quite some time. Similar results occurred with optimizations at the end of the 1990s, but in favor of stocks. Overallocating to stocks right before the technology bubble burst in 2000 would have had disastrous results. Models based strictly on investment professional-assigned inputs are subject to his or her estimate error, as well as the investment professional's biases regarding asset class expectations, which may result in inconsistent portfolio construction.

Liquidity Needs

Traditional models may also provide what we believe to be sub-optimal solutions for an investor's liquidity needs. For example, an investor who requires a significant amount of income will likely be directed toward a portfolio on the low-risk end of the efficient frontier. Such an allocation may be heavily weighted toward bonds and short-term instruments. This occurs because of the broad-based asset classes used in traditional portfolio construction; bonds typically provide a higher level of income versus stocks and other asset classes, and therefore are generally more heavily weighted in lower-risk portfolios. This model attempts to solve for an investor's liquidity needs at the expense of the investor's time horizon. Suppose an investor had a 20-year time horizon. A portfolio that consisted primarily of bonds would likely be sub-optimal because it may not provide enough growth to support his or her lifestyle in the future. By solving for the income problem, we believe that traditional models risk presenting the investor with a portfolio of bonds, which may be ill-equipped to protect against inflation.

Time Horizon

Traditional models may also provide a sub-optimal strategy for investors based on time horizon. Consider the example of an investor who plans to retire in five years. Suppose the investor is in good health and believes he or she will live 20 years in retirement. Many of the target-date funds in use today, which follow an efficient-frontier approach, would likely have this investor in one of the most conservative models.

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Such conservative models typically have a high allocation to bonds. Today, the 10-year Treasury yield to maturity is near 4.0%, while inflation is running at 5.0%, thus netting a real yield to maturity of -1.0%.² This negative implied real return would almost surely fall short of meeting a retiree's income and appreciation needs over a 20-year period. Even if we relaxed the assumption so that the portfolio utilizes active fixed income money managers investing in spread products, the incremental returns from those spreads would only add, on average, about 1.0% to 2.0% to that real return.³ Today, a person's life expectancy in retirement is significantly longer than in prior generations. The old rule of thumb that an individual should invest almost entirely in bonds when he or she reaches retirement may no longer apply to today's retiree.⁴

Investment Selections

In many instances, the investments used in asset allocation models are established without referring back to the investor's original objectives. For example, some strategies use passive broad-based capitalization-weighted index funds to fill many of the allocations. Although we certainly applaud the simplicity and cost-effectiveness of this passive approach, it is fair to question if every investor entering these portfolios fits the risk characteristics of these indices. For example, someone who is averse to downside risk, but in need of an equity market-like return, could have experienced a -38% three-year cumulative loss had he or she been invested in an S&P 500 Index fund between 2000 and 2002.⁵ It might prove even worse to populate the allocations with active fund managers without considering the effects the managers' active decision making may have on the portfolio as a whole. Adding active managers to an allocation without understanding their effect on the overall allocation can cause a portfolio to take unintended large exposures in certain markets (if the managers have a similar investment focus) or cause a canceling effect (if one manager is buying what the other one is selling). This active management potpourri could further intensify the sub-optimality of the portfolio at a time when the investor needs the most diversification.

Case Study

In this section, we provide a hypothetical case study to illustrate the challenges faced by a typical investor with an objective of an equity-like return while seeking to minimize downside risk. We will compare the use of a more traditional approach to portfolio construction versus an objectives-based approach. Our hypothetical investor is near retirement and is in good health. He saved a reasonable amount of money over the years, but does not have any type of guaranteed retirement benefit, such as a pension. Therefore, he is relying on his savings and Social Security to fund his retirement. As the facts below demonstrate, in order for our investor to maintain his desired lifestyle, he

² Bloomberg, June 30, 2008

³ Ibbotson Associates

⁴ Investopedia.com, "Don't Rely Solely on Financial Software or Planner Sheets"

⁵ Zephyr StyleADVISOR

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needs an 8% return (adjusted for inflation) in addition to Social Security, which may require a significant investment in equities. However, based on the recent market downturns, he is well aware of the potential risks involved in investing with equities.

Hypothetical Investor	
Age:	60
Required Rate of Return:	8% (5% income need and 3% assumed inflation)
Savings:	\$800,000
Annual Income Needs:	\$40,000

Issue

How does an investor attempt to meet a return requirement that may call for significant equity exposure, while seeking to minimize the downside risks that equity market exposure is subject to?

Assumptions

Our hypothetical investor has \$800,000 in retirement assets and plans to live off of \$40,000 pre-tax per year, in addition to his other sources of income (i.e., Social Security benefits). His plans equate to an approximate required return of 8%, when accounting for inflation of 3%.

In today's terms, an 8% required return most likely would be achieved through a portfolio comprised primarily of equities. Historically, stocks returned around 10.5% from 1926–2007, while bonds earned a return of approximately 5.3% during the same time period.^{6,7} However, if one changes the analysis period to end in 1980, which was the unofficial start of the 25-year secular decline in interest rates, the return on bonds is closer to 3.7%.⁸

Traditional Model Composition

In order to minimize overall portfolio risk and achieve an 8% return within a traditional asset allocation framework, an investment professional generally would look to the most diversified mix of equity asset class sub-categories. The traditional equity asset class sub-categories typically used are U.S. large-cap equity, U.S. small- and mid-cap equity, and non-U.S. equity. Exhibit 2 details the aforementioned asset classes, as represented by various indices: U.S. large-cap equity (S&P 500 Index), U.S. mid-cap equity (Russell Midcap[®] Index), U.S. small-cap equity (Russell 2000[®] Index) and non-U.S. equity (MSCI EAFE Index).

⁶ Bonds as defined by the Ibbotson Associates Intermediate-Term Government Total Return time series; stocks as defined by the S&P 500 Index.

⁷ Ibbotson Associates

⁸ Ibbotson Associates

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Exhibit 2. Return and Risk Statistics for Traditional Equity Asset Classes

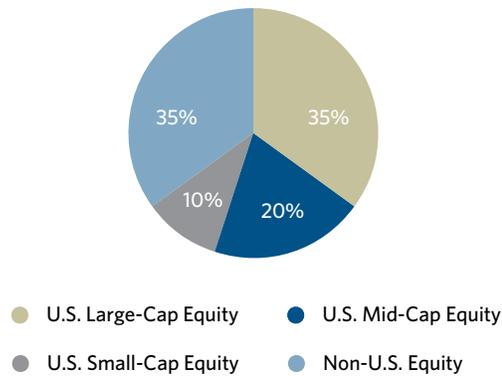
10-Year Return and Risk Ended 12/31/2007		
Asset Class	Return	Risk (Standard Deviation)
U.S. Large-Cap Equity	5.9%	14.7%
U.S. Mid-Cap Equity	9.9%	15.9%
U.S. Small-Cap Equity	7.1%	19.8%
Non-U.S. Equity	9.0%	14.5%

Source: Zephyr StyleADVISOR

Note: Past performance is not a guarantee of future results. Indices are not available for direct investment.

Using these traditional inputs, we developed a hypothetical portfolio based on the prior 10-year performance data that would have achieved close to an 8% return. Although there are various combinations of these indices that would solve for an 8% return over the last 10 years, we based our allocation on some common practices, such as allocating no more than 20% to small- or mid-cap stocks and no more than 40% to international equities, as well as allocating a minimum of at least 5% to all asset classes. This portfolio is for illustrative purposes and represents what we believe might be a traditional, all-equity portfolio. Exhibit 3 shows the asset allocation of what we have labeled as the Traditional portfolio, and Exhibit 4 shows some performance characteristics of this portfolio.

Exhibit 3. Asset Allocation of Traditional Portfolio⁹



Source: Zephyr StyleADVISOR

⁹ Asset class representations: U.S. large-cap equity = S&P 500 Index, U.S. mid-cap equity = Russell Midcap Index, U.S. small-cap equity = Russell 2000 Index, non-U.S. equity = MSCI EAFE Index. Indices are not available for direct investment.

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Exhibit 4. Return and Risk Statistics for Traditional Portfolio

Summary Statistics: 10 Years Ended 12/31/2007					
	Return	Standard Deviation	Maximum Drawdown	Up Capture vs. Market*	Down Capture vs. Market*
Traditional Portfolio	8.1%	14.3%	-40.2%	104.7%	101.6%

*Market is defined as the MSCI World Index.

Source: Zephyr StyleADVISOR

Note: Past performance is not a guarantee of future results.

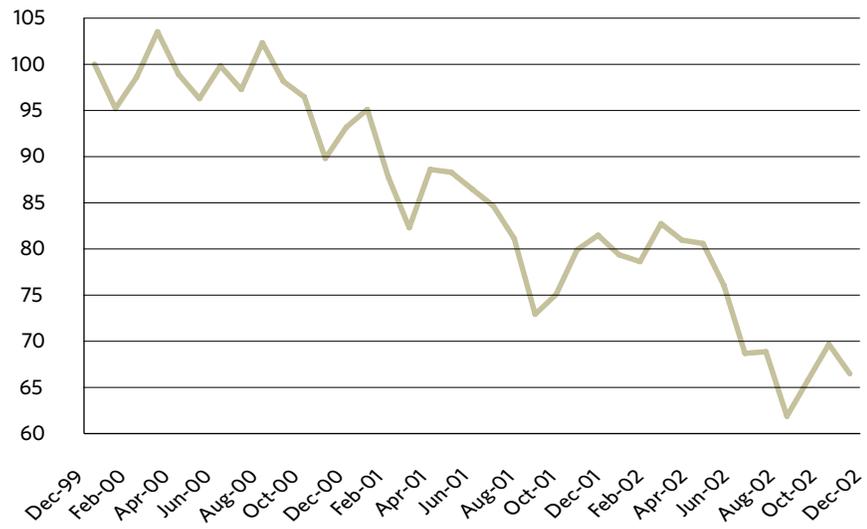
Exhibit 4 shows that, over the past 10 years, the Traditional portfolio achieved a return of 8.1% with a risk (standard deviation) of 14.3%. The risk measure of standard deviation measures the average variability of the average return. The higher the number, the greater the performance swings up and down. The up-market capture ratio is 104.7%, and the down-market capture ratio is 101.6%. Up-market capture ratio measures what percentage of the market return the portfolio captures during time periods when the market has a positive return. Down-market capture ratio measures what percentage of the market return the portfolio participates in during time periods when the market has a negative return. The Traditional portfolio performed a bit better than the market when the market was up, and it performed only slightly worse than the market when the market was down. The maximum drawdown measures the largest drop from the portfolio's peak to trough. Over the 10-year period, the largest decline in the portfolio to a bottom was 40.2%.

The overall longer-term numbers appear favorable; however, our concern is how the portfolio performed during difficult time periods. Exhibit 5 demonstrates how this portfolio would have fared during the last bear market, which lasted from approximately early 2000 through the end of 2002. The cumulative return of the portfolio in the 2000–2002 period was -35.4%. Although this sub-period is incorporated into the risk-return statistics, Exhibit 5 illustrates how the most often used return and standard deviation figures in mean-variance optimization models overlook how poorly a portfolio can perform during extended periods of negative returns.

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Exhibit 5. Cumulative Return Chart of Traditional Portfolio



Source: Zephyr StyleADVISOR

Note: Past performance is not a guarantee of future results.

Case Study Findings

Despite developing a well-diversified portfolio,¹⁰ the portfolio suffered steep losses during difficult markets. If our investor was near retirement during the 2000–2002 period, more than one-third of his wealth would have been wiped out. This is an important point, in that the sequence of returns may be just as important as return and risk expectations. Such drawdowns may dramatically increase the likelihood that the investor’s retirement plans will be adversely affected. So the question is: Is it possible to obtain the level of returns that our investor requires without incurring the significant downside risk to which an all-equity portfolio has historically been exposed? We will address this question in the next section, titled “Objectives-Based Investing.”

Earlier in this paper, we listed what we believe to be the four factors that are potential flaws to the traditional framework of designing portfolios. These are:

1. Model assumptions that historical performance will persist into the future or that forecasted risk-return characteristics will prove accurate
2. Liquidity needs are determined by the stock and bond mix
3. Time horizon is determined by the stock and bond mix
4. Limited scope in the use and selection of investment vehicles

We also illustrated how these flaws may surface in the case of a typical investor. In the following section, we will discuss the concept of objectives-based investing and how it

¹⁰ The underlying indices represent approximately 4,000 securities. Source: Thomson Reuters

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may be able to address what we believe are some of the inherent flaws in traditional portfolio design. We will also revisit the case study and apply an objectives-based framework in an attempt to solve for the problems faced by our investor.

Objectives-Based Investing

The concept of objectives-based investing involves designing a portfolio based on an investor's objectives as they relate to current and future market conditions.

Portfolios designed around long-term averages and historical experience may not necessarily be in tune with where the market is today or where it is headed. For example, real estate investment trusts (REITs) have historically provided a high level of income. However, at the end of 2006, the yield on REITs fell below the yield on 3-month Treasury bills.¹¹ Investors with an objective of high income may have been better served if their investment professionals had reduced their REIT allocations and increased their allocations to a different income-generating asset class. Temporary market dislocations such as this may often be overlooked by a portfolio construction process that relies on long-term averages for their inputs. Objectives-based investing is designed to factor in today's market, as well as history.

To facilitate a framework for objectives-based investing, we believe an investor, with the help of his or her investment professional, should take the following steps:

- Step 1. Look to the asset classes and investment selections that may facilitate the investor's objective
- Step 2. Develop an asset allocation that may have the best chance to meet the objective
- Step 3. Compare the resulting portfolio to allocations that reside on the efficient frontier to help ensure the portfolio is reasonable from a mean-variance perspective

The best way to illustrate this process may be to apply it to a real-world situation. Here we will revisit our case study and apply the objectives-based approach.

Case Study—Revisited

In our earlier case study, the investor was faced with a difficult choice. He was facing retirement and needed to live off of his \$800,000 in savings. In order to meet this investment objective, he required an 8% annualized return, but was faced with the significant downside risk of an all-equity portfolio. In short, in order to meet his desired annualized return, his objective—like that of many similar investors facing retirement—is to preserve his principal, while continuing to participate in the market.

¹¹ The yield on the S&P REIT Index on December 31, 2006, was 3.73% versus 5.06% for the 3-month Treasury bill. Sources: Thomson Reuters and Bloomberg

Step 1. Look to the asset classes and investment selections that may facilitate the objective

Objectives-Oriented Selections

In applying the objectives-based framework, we first look outside of the traditional broad-based equity asset classes for those asset classes that historically have provided equity market exposure, while seeking to minimize downside risk. Asset classes, such as defensive market sectors, high-quality/conservative-oriented stock strategies, partial-hedging strategies (i.e., covered call writing) and alternative investments (i.e., lower-risk hedging strategies), have historically helped to minimize downside risk in difficult market environments. Exhibit 6 shows these market exposures and the indices that are used as proxies for these exposures. Exhibit 7 shows the return, risk and correlation of these indices relative to a capitalization-weighted world equity benchmark, the MSCI World Index. A correlation matrix that demonstrates the diversification of these indices is included in Exhibit 8.

Exhibit 6. Defensive Strategies and Corresponding Indices

Asset Class/Strategy	Index	Description/Rationale
Covered Call Portfolio	CBOE S&P 500 BuyWrite Index	Equities with call option premium income act as partial hedge relative to the broad equity market.
U.S. Dividend Growth Equity	S&P 500 Dividend Aristocrats Index	Companies with consecutive years of dividend growth have historically been defensive relative to the broad equity market.
International Dividend Growth Equity	International Dividend Achievers Index™	Companies with consecutive years of dividend growth have historically been defensive relative to the broad equity market.
Global Defensive Sector	S&P Global Consumer Staples BMI Index	Consumer staples companies have historically been defensive relative to the broad equity market.
Global Defensive Sector	S&P Global Health Care BMI Index	Health care companies have historically been defensive relative to the broad equity market.
Global Defensive Sector	S&P Global Utilities BMI Index	Utilities companies have historically been defensive relative to the broad equity market.
Managed Futures	S&P DTI Index	Long/short commodities strategies have exhibited low correlations and drawdowns relative to the broad equity market.
Currency Income	DB G10 Currency Harvest Index	Long/short currency strategies have exhibited low correlations and drawdowns relative to the broad equity market.
Convertible Arbitrage	HFRX Convertible Arbitrage Index	Convertible bond arbitrage strategies have exhibited low correlations and drawdowns relative to the broad equity market.
Merger Arbitrage	HFRX Merger Arbitrage Index	Merger arbitrage strategies have exhibited low correlations and drawdowns relative to the broad equity market.

Source: Lockwood Advisors, Inc.

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Exhibit 7. Summary Statistics for Defensive Strategy Indices Versus the MSCI World Index

Summary Statistics: 10 Years Ended 12/31/2007							
	Return	Standard Deviation	Sharpe Ratio	Maximum Drawdown	Up Capture vs. MSCI World Index	Down Capture vs. MSCI World Index	Correlation vs. MSCI World Index
CBOE S&P 500 BuyWrite Index	7.6%	10.7%	0.37	-30.2%	62.8%	56.6%	0.83
S&P 500 Dividend Aristocrats Index	7.7%	12.7%	0.32	-23.6%	58.5%	49.8%	0.68
International Dividend Achievers Index	8.2%	16.2%	0.28	-29.6%	95.4%	91.6%	0.79
S&P Global Consumer Staples BMI Index	8.8%	11.3%	0.46	-24.1%	46.7%	25.1%	0.52
S&P Global Health Care BMI Index	7.0%	11.9%	0.28	-32.6%	51.9%	44.5%	0.56
S&P Global Utilities BMI Index	11.6%	12.3%	0.65	-34.0%	62.4%	31.7%	0.48
S&P DTI Index	8.8%	5.9%	0.87	-7.6%	17.6%	-29.4%	-0.11
DB G10 Currency Harvest Index	11.3%	6.8%	1.14	-8.2%	36.1%	-10.5%	0.22
HFRX Convertible Arbitrage Index	6.0%	4.2%	0.57	-9.6%	17.5%	-8.7%	0.22
HFRX Merger Arbitrage Index	6.8%	3.9%	0.82	-4.6%	22.1%	-5.1%	0.40
MSCI World Index	7.5%	14.1%	0.27	-46.3%	100.0%	100.0%	1.00

Source: Zephyr StyleADVISOR

Note: Past performance is not a guarantee of future results. Indices are not available for direct investment.

The key statistics in Exhibit 7 that are not typically included in mean-variance optimization are the maximum drawdown, down capture and up capture. Over the last 10 years, most of the indices have demonstrated below-average maximum drawdown, down-capture and up-capture numbers, relative to a more broad-based world equity index (as defined by the MSCI World Index). In fact, some of the alternative indices have negative down-capture ratios, which means they have provided positive returns when the market was down.

Exhibit 8. Correlation Matrix for Defensive Strategy Indices Versus the MSCI World Index—10 Years Ended 12/31/2007

	1	2	3	4	5	6	7	8	9	10	11
1) CBOE S&P 500 BuyWrite Index	1										
2) S&P 500 Dividend Aristocrats Index	0.65	1									
3) International Dividend Achievers Index	0.68	0.69	1								
4) S&P Global Consumer Staples BMI	0.43	0.74	0.62	1							
5) S&P Global Health Care BMI	0.51	0.54	0.51	0.62	1						
6) S&P Global Utilities BMI	0.45	0.5	0.49	0.58	0.49	1					
7) S&P DTI Index	-0.15	-0.19	-0.05	-0.1	-0.13	0.04	1				
8) DB G10 Currency Harvest	0.22	0.16	0.28	0.05	0.03	0.15	0.11	1			
9) HFRX Convertible Arbitrage Index	0.18	0.13	0.16	0.03	0.05	0.08	0.12	0.41	1		
10) HFRX Merger Arbitrage Index	0.47	0.35	0.4	0.38	0.39	0.37	0.07	0.18	0.35	1	
11) MSCI World Index	0.83	0.68	0.79	0.52	0.56	0.48	-0.11	0.22	0.22	0.4	1

Source: Zephyr StyleADVISOR

Note: Indices are not available for direct investment.

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Exhibit 8 shows the cross correlations for the defensive strategy indices. A correlation of 1.0 indicates that returns between the two indices tend to move almost perfectly in tandem. A correlation of -1.0 indicates that returns between the two indices tend to move opposite of each other. A correlation of 0.0 indicates that there is no real relation in the pattern of returns between the two indices. The important point this chart makes is that not only do most of the indices have below-average correlations to the market (as defined by the MSCI World Index), but they also have low correlations to each other. This is critical in that we want the portfolio we are building to maintain a defensive posture versus the market (i.e., to not move in sync with the market, especially during down periods), but we also want the component strategies to not move in lock step with each other.

In this section, we identified a number of defensive indices that exhibit the four critical characteristics that we are looking for in building a defensively oriented portfolio: low market down capture, low maximum drawdown, low correlation to the market and low correlation among the component indices. The next step is to assemble these component indices into a hypothetical portfolio that attempts to achieve the investor's earlier stated objective of an 8% expected return.

Step 2. Develop an asset allocation that may have the best chance to meet the objective

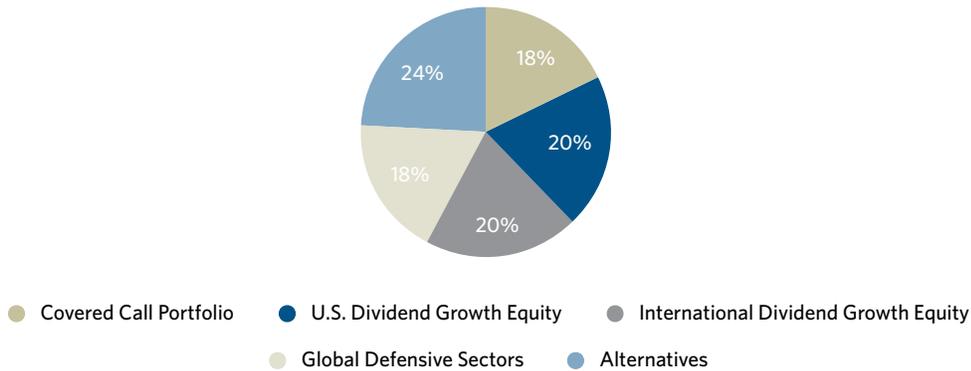
The Objectives Portfolio

As we did for the Traditional portfolio, we developed a hypothetical portfolio using indices that would have generated an 8% return over the last 10 years (ended 12/31/2007) using an objectives-based approach. We will refer to this portfolio as the Objectives portfolio. Again, various weighting schemes could have been used to solve for this return objective; however, we believe that the chosen allocation is prudent based on a commonly used practice of allocating no more than 30% to alternatives and no more than 10% to any sector index. The resulting asset allocation is shown in Exhibit 9.

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Exhibit 9. Asset Allocation of Objectives Portfolio¹²



Source: Zephyr StyleADVISOR

Exhibit 10. Return and Risk Statistics for Objectives Portfolio

Summary Statistics: 10 Years Ended 12/31/2007					
	Return	Standard Deviation	Maximum Drawdown	Up Capture vs. Market*	Down Capture vs. Market*
Objectives Portfolio	8.5%	8.4%	-14.6%	57.0%	42.7%

*Market is defined as the MSCI World Index.

Source: Zephyr StyleADVISOR

Note: Past performance is not a guarantee of future results.

Exhibit 10 shows that, over the past 10 years, the Objectives portfolio would have achieved a return of 8.5% with a risk (standard deviation) of 8.4%. The up-market capture ratio is 57.0%, and the down-market capture ratio is 42.7%. Although the portfolio participated in 57% of the market's positive performance, it only participated in 43% of the market's negative performance. The difference of 14% (57% minus 43%) is, in our view, a favorable number, as it indicates that the portfolio earned a positive market capture spread. The maximum drawdown for the Objectives portfolio is -14.6%. This indicates that the largest percentage decline from peak to trough was 14.6%.

¹² Asset class representations (% of portfolio): Covered Call Portfolio = CBOE S&P 500 BuyWrite Index (18%), U.S. Dividend Growth Equity = S&P 500 Dividend Aristocrats Index (20%), International Dividend Growth Equity = International Dividend Achievers Index (20%), Global Defensive Sectors = S&P Global Consumer Staples BMI Index (6%)/S&P Global Health Care BMI Index (6%)/S&P Global Utilities BMI Index (6%), Alternatives = S&P DTI Index (6%)/DB G10 Currency Harvest Index (6%)/HFRX Convertible Arbitrage Index (6%)/HFRX Merger Arbitrage Index (6%). Indices are not available for direct investment.

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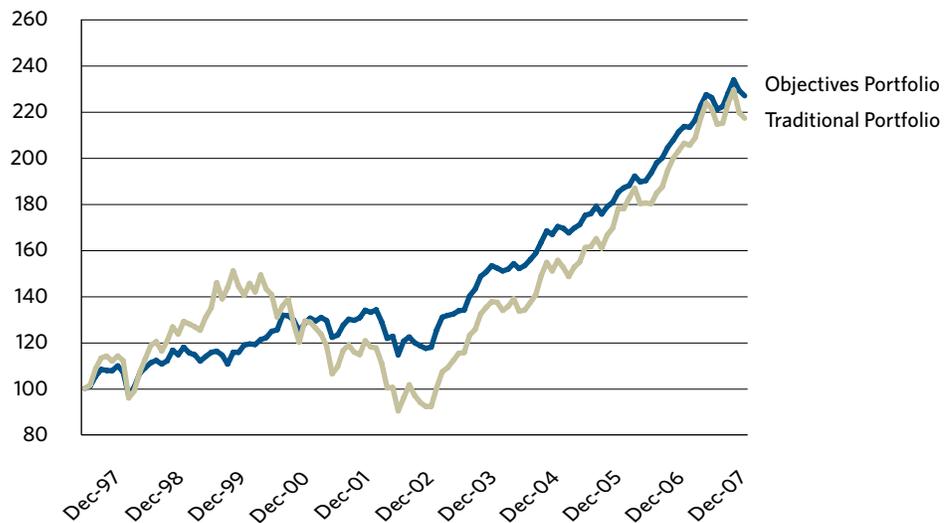
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Step 3. Compare the resulting portfolio to allocations that reside on the efficient frontier to help ensure that the portfolio is reasonable from a mean-variance perspective

Comparison of Objectives Portfolio Versus Traditional Portfolio

A complete efficient frontier analysis would warrant a separate paper in itself. In this paper, we provide a comparison of the Objectives portfolio to the Traditional portfolio for illustrative purposes.

Exhibit 11. Cumulative Return Chart
Traditional Portfolio Versus Objectives Portfolio—Full Period (1998–2007)



Source: Zephyr StyleADVISOR
Note: Past performance is not a guarantee of future results.

Exhibit 11 indicates that over the entire measurement period (10 years ended 12/31/2007), performance results for both the Objectives portfolio and the Traditional portfolio ended at nearly the same place. The interesting item to note is the path that each portfolio took to arrive at its end point. The return path for the Objectives portfolio was somewhat smoother than the return path for the Traditional portfolio, indicating lower volatility.

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Exhibit 12. Return and Risk Statistics
Traditional Portfolio Versus Objectives Portfolio

Summary Statistics: 10 Years Ended 12/31/2007					
	Return	Standard Deviation	Maximum Drawdown	Up Capture vs. Market*	Down Capture vs. Market*
Objectives Portfolio	8.5%	8.4%	-14.6%	57.0%	42.7%
Traditional Portfolio	8.1%	14.3%	-40.2%	104.7%	101.6%

*Market is defined as the MSCI World Index.
Source: Zephyr StyleADVISOR
Note: Past performance is not a guarantee of future results.

Both portfolios generated returns slightly above our target of 8%, which may be largely due to the effects of rebalancing in the portfolios. The standard deviation of the Objectives portfolio, which measures risk, was 8.4% versus 14.3% for the Traditional portfolio. This is due in large part to the lower standard deviation and correlation among the component indices in the Objectives portfolio. The key measures here are the down-market capture ratio and the maximum drawdown. The Traditional portfolio captured slightly more than 100% of negative market performance, whereas the Objectives portfolio only captured 43% of negative market performance. Even though the Objectives portfolio only captured 57% of up-market performance, it was still able to earn an 8.5% return over this time period, which slightly exceeded the return of the Traditional portfolio. It is also important to note that the overall up-market capture ratio of the Objectives portfolio exceeded its down-market capture ratio. The maximum drawdown for the Objectives portfolio was -14.6% versus -40.2% for the Traditional portfolio. This directly demonstrates that, during extreme declines, the Objectives portfolio's down performance was significantly muted relative to that of the Traditional portfolio. Overall, the Objectives portfolio had lower average volatility; however, it lagged the Traditional portfolio in the up-market capture ratio.

It is important to note that measures such as maximum drawdown and down-market capture ratio versus the market may not typically be used when evaluating portfolios; however, when minimizing downside risk is part of an investor's objective, these items are often useful in measuring the effectiveness of meeting that objective. It is essential that the measures of the effectiveness of a portfolio tie back to the objective. For example, if income is the key objective, then measures of gross and net yield may be important. On the other hand, if tax efficiency is a key objective, then after-tax returns may be important.

The stark contrast in the risk measures in Exhibit 12 can be attributed to the number and diversity of asset classes and strategies utilized in the Objectives portfolio. In the Objectives portfolio, we used 10 different underlying asset categories versus four in the Traditional portfolio. More important than the number of options used, is the diversity of the options. As we saw in Exhibit 8, the correlations among these options are relatively low. The low correlation among these vehicles, as well as their unique defensive characteristics, provides what we believe to be a compelling risk profile for the Objectives portfolio, while also helping to meet the investor's return objective.

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The next two exhibits focus on how the portfolios performed in a bear market sub-period and a bull market sub-period.

Exhibit 13. Historical Cumulative Performance Chart
 Traditional Portfolio Versus Objectives Portfolio—Bear Market (2000–2002)



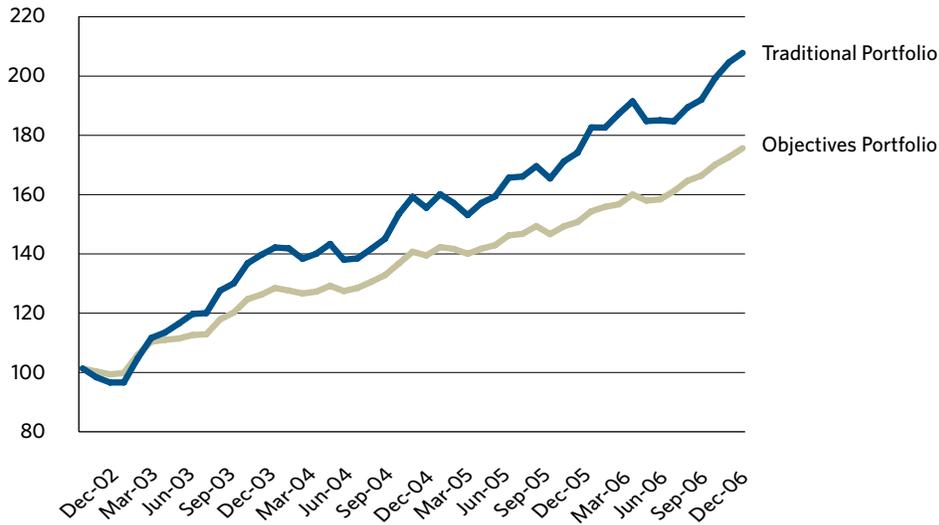
Source: Zephyr StyleADVISOR
 Note: Past performance is not a guarantee of future results.

Exhibit 13 clearly demonstrates that the Objectives portfolio would have performed significantly better than the Traditional portfolio during the January 2000–December 2002 bear market period. The Traditional portfolio lost 34% of its value over this time period, whereas the Objectives portfolio would have actually gained 3.1% over this time period. Remember from the beginning of the case study, we were attempting to build a portfolio that meets the objective of an 8% annualized return over time, while seeking to limit losses in down markets. This graph demonstrates success toward meeting the latter half of that objective for this historical time period.

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Exhibit 14. Historical Cumulative Performance Chart
 Traditional Portfolio Versus Objectives Portfolio—Bull Market (2003–2006)



Source: Zephyr StyleADVISOR
 Note: Past performance is not a guarantee of future results.

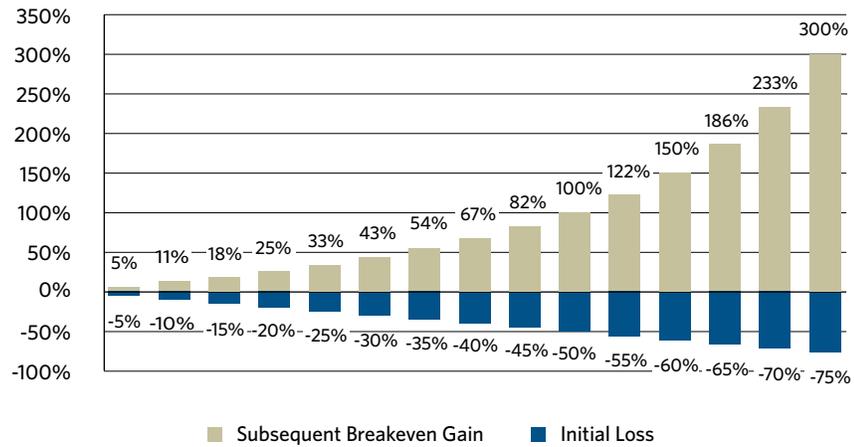
The bull market period between 2003 and 2006 was characterized by double-digit returns each year. Exhibit 14 demonstrates how the Traditional and Objectives portfolios would have performed in that market environment.

The Traditional portfolio would have provided a 109% cumulative return versus a 76% cumulative return for the Objectives portfolio. This 33% shortfall for the Objectives portfolio over the 2003–2006 period compares to the 37% outperformance of the Objectives portfolio in the 2000–2002 period. In our view, avoiding significant losses is imperative, as it takes a larger subsequent return to break even (see Exhibit 15). For example, a portfolio that is down 50% requires a 100% return to get back to where it was. Why not try to avoid the 50% loss in the first place?

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Exhibit 15. Gains Required to Break Even From Losses



Source: Lockwood Advisors, Inc.

Both the traditional and objectives-based approaches may meet an investor’s objectives. For example, in the particular time period measured, both portfolios met the 8% annualized objective. However, not all time periods are similar to this one, which included a three-year bull market, a three-year bear market and then a four-year bull market. There may be other 10-year time periods that are significantly more challenging. We are not necessarily stating that a more traditional approach will fall short of an investor’s objectives in all circumstances. However, we believe the objectives-based approach may be a more intuitive methodology to help design portfolios to meet investor objectives.

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Conclusion

We believe that adopting an objectives-based approach may increase the likelihood of meeting an investor's financial goals versus more traditional approaches. This is because traditional efficient frontier approaches to portfolio construction may entail potential shortfalls, including inaccurate risk-return assumptions and the presumption that liquidity needs and time horizon are determined by the stock and bond mix. We contend that adopting an objectives-based approach, as compared to a "one-size-fits-all" approach via traditional modeling may allow for greater customization and less mismatch error when developing a portfolio to meet an investor's needs.

Throughout this paper, we have attempted to frame the discussion for a different method of constructing portfolios. Common practice is to develop a portfolio employing some method of mean-variance optimization based on long-term historical returns, risk and covariance. Such methods do not necessarily take into account the specific objectives of an investor. By implementing an objectives-based approach to portfolio construction, we believe an investment professional can build a portfolio that is based on the investor's current situation and incorporate future expectations. The example provided in the case study illustrates just one type of objective. One can develop multiple frameworks for different objectives, such as income, tax efficiency and absolute return. As more investment strategies and vehicles are introduced into the marketplace, the opportunity set for objectives-based investing likely will continue to grow and, hopefully, provide better, more efficient solutions for investors.

Since we conducted our original analysis based on data as of year-end 2007, the world equity markets experienced one of the worst years in several decades. In order to maintain the integrity of the original analysis, we have provided an update to key charts and tables through December 31, 2008, in the Appendix. In summary, all major equity asset classes declined significantly in 2008. Both the Objectives portfolio and the Traditional portfolio experienced declines throughout the year; however, as expected, the Objectives portfolio's decline was limited relative to that of the Traditional portfolio. For the year, the Objectives portfolio outperformed the Traditional portfolio by approximately 11%. Although the down-market capture ratio of the Objectives portfolio was approximately 70% for 2008, which is above the historical average, we believe the portfolio fared well, considering the convergence of performance among many asset classes, including many alternative categories.

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About the Author

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Steven Treftz is a Portfolio Officer responsible for the investment oversight of Lockwood AdvisorFlex™ Portfolios (AdvisorFlex), including the asset allocation and investment decisions for AdvisorFlex. Previously, Mr. Treftz was the Manager of Investment Research responsible for managing and maintaining Lockwood Advisors, Inc.'s (Lockwood) evaluation and research opinions on traditional separate account managers. Prior to joining Lockwood in 2004, Mr. Treftz worked as an Investment Analyst in Towers Perrin's Asset Consulting Group, where he was responsible for investment manager research, asset allocation and portfolio strategy/optimization for corporate defined benefit plans. Mr. Treftz also was instrumental in building Towers Perrin's proprietary asset simulation and optimization models. Mr. Treftz earned a dual Bachelor of Science in Finance and Risk Management from Temple University. He is a Chartered Financial Analyst® (CFA®) charterholder and is a member of the CFA Institute and the CFA Society of Philadelphia. Mr. Treftz is FINRA™ Series 7, 24 and 65 registered and has nine years of investment experience.

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Appendix

Updated Exhibits as of December 31, 2008

Exhibit 1. Return and Risk Statistics for Stocks and Bonds

10-Year Return and Risk Ended 12/31/2008		
Asset Class ¹³	Return	Risk (Standard Deviation)
U.S. Equity	-1.4%	15.1%
U.S. Fixed Income	5.6%	3.8%

Source: Zephyr StyleADVISOR

Note: Past performance is not a guarantee of future results. Indices are not available for direct investment.

Equity markets around the globe experienced significant losses in 2008. The updated analysis through 2008 bears out these results in meaningful changes to all time periods measured. In Exhibit 1, the 10-year return on U.S. equities through 12/31/2008 was -1.4%, compared to the 10-year return through 2007 of 5.9%. The 10-year return on U.S. bonds declined modestly to 5.6% (10 years as of 12/31/2008) from 6.0% (10 years ended 12/31/2007).

Exhibit 2. Return and Risk Statistics for Traditional Equity Asset Classes

10-Year Return and Risk Ended 12/31/2008		
Asset Class ¹⁴	Return	Risk (Standard Deviation)
U.S. Large-Cap Equity	-1.4%	15.1%
U.S. Mid-Cap Equity	3.2%	17.4%
U.S. Small-Cap Equity	3.0%	20.4%
Non-U.S. Equity	1.2%	16.4%

Source: Zephyr StyleADVISOR

Note: Past performance is not a guarantee of future results. Indices are not available for direct investment.

All major equity asset classes experienced significant declines in 2008, bringing the 10-year trailing returns down as well. The difference in 10-year returns for the asset classes in Exhibit 2 from 12/31/2007 to 12/31/2008 range from -4.1% to -7.8%. Risk also increased slightly across all asset classes.

¹³ Bonds as defined by the Barclays Capital U.S. Aggregate Bond Index; stocks as defined by the S&P 500 Index.

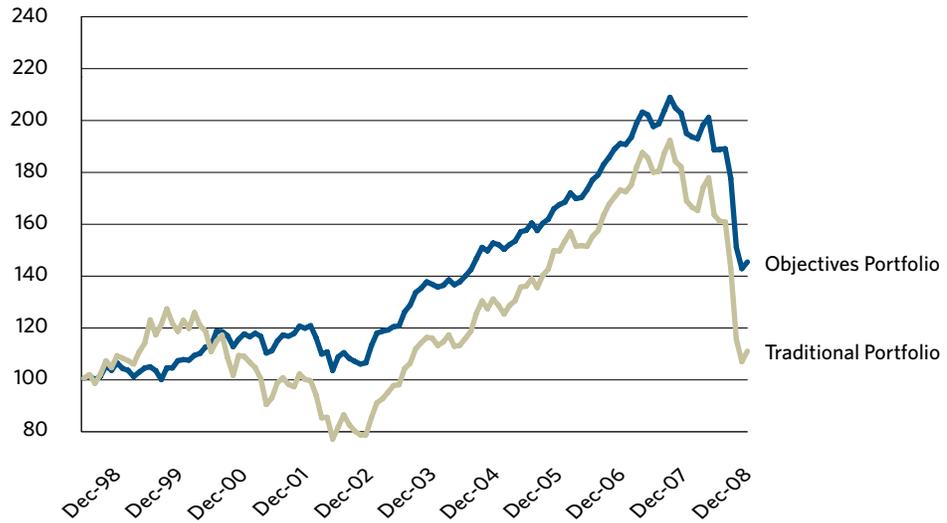
¹⁴ Asset class representations: U.S. large-cap equity = S&P 500 Index, U.S. mid-cap equity = Russell Midcap Index, U.S. small-cap equity = Russell 2000 Index, non-U.S. equity = MSCI EAFE Index

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Exhibit 11. Cumulative Return Chart

Traditional Portfolio Versus Objectives Portfolio—Full Period (1999–2008)



Source: Zephyr StyleADVISOR
 Note: Past performance is not a guarantee of future results.

Through 12/31/2008, the Objectives portfolio experienced a decline from its peak in the middle of 2008; however, the decline was not as great as that experienced by the Traditional portfolio.

Exhibit 12. Return and Risk Statistics

Traditional Portfolio Versus Objectives Portfolio

Summary Statistics: 10 Years Ended 12/31/2008					
	Return	Standard Deviation	Maximum Drawdown	Up Capture vs. Market*	Down Capture vs. Market*
Objectives Portfolio	3.8%	9.7%	-32.0%	57.2%	48.3%
Traditional Portfolio	1.0%	15.6%	-44.9%	106.9%	99.8%

*Market is defined as the MSCI World Index.
 Source: Zephyr StyleADVISOR
 Note: Past performance is not a guarantee of future results.

Returns for both the Objectives and Traditional portfolios declined significantly from 12/31/2007, as shown in Exhibit 12. The 10-year returns for the Objectives portfolio declined from 8.5% to 3.8%, and for the Traditional portfolio from 8.1% to 1.0%. For the Objectives portfolio, the maximum drawdown was much greater as of 12/31/2008 at -32.0% versus -14.6% as of 12/31/2007; the up-market capture ratio and down-market capture ratio remained quite stable for both models.

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Supplemental Charts

Through 12/31/2008, both portfolios experienced declines over the trailing one- and three-year periods. Over the trailing one- and three-year periods, respectively, the Objectives portfolio saved approximately 10.9% and 4.6% of annualized return relative to the Traditional portfolio.

Exhibit 16. Trailing Period Returns
Traditional Portfolio Versus Objectives Portfolio

Trailing Period Returns Ended 12/31/2008					
	1 Year	3 Year	5 Year	7 Year	10 Year
Objectives Portfolio	-28.63%	-3.58%	1.73%	3.18%	3.84%
Traditional Portfolio	-39.56%	-8.18%	-0.16%	1.43%	1.02%

Source: Zephyr StyleADVISOR
Note: Past performance is not a guarantee of future results.

Exhibit 17. Calendar-Year Returns
Traditional Portfolio Versus Objectives Portfolio

Calendar-Year Returns									
	2008	2007	2006	2005	2004	2003	2002	2001	2000
Objectives Portfolio	-28.63%	7.35%	17.01%	7.33%	13.25%	24.05%	-7.88%	-1.31%	13.43%
Traditional Portfolio	-39.56%	6.92%	19.80%	9.61%	16.90%	36.48%	-18.42%	-12.55%	-6.83%

Source: Zephyr StyleADVISOR
Note: Past performance is not a guarantee of future results.

Key Terms

Down-Market Capture Ratio. Represents the percentage of index performance in “down” markets in which a portfolio has participated. A down-market capture ratio is measured in periods when the market’s return is less than zero. The measure is calculated by linking the returns for all down market sub-periods over the selected time period for both the portfolio and the index, and then calculating a ratio of the product of the two numbers. In general, the lower the portfolio’s down-market capture ratio, the better the portfolio protected capital during a market decline.

Maximum Drawdown. This is the maximum loss (compounded, not annualized) that the portfolio ever incurred during any sub-period of the entire time period. Conceptually, the calculation includes all sub-periods of the time period in question and calculates the compounded return of the portfolio.

Sharpe Ratio. Relates the difference between the portfolio’s return and the risk-free rate to the standard deviation of the portfolio’s rate of return over the given period. This is used to risk adjust the performance of a portfolio to determine whether the return earned was sufficient to reward the investor for the degree of risk (volatility) incurred.

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Standard Deviation. A gauge of risk that measures the spread of the difference of returns from their average. The more a portfolio's returns vary from the average, the higher the standard deviation. Standard deviation is a measure of total variation of return and is a gauge of total risk, unlike beta, which measures market risk.

Up-Market Capture Ratio. Represents the percentage of index performance in “up” markets in which a portfolio has participated. An up-market capture ratio is measured in periods when the market's return is more than zero. The measure is calculated by linking the returns for all up market sub-periods over the selected time period for both the portfolio and the index, and then calculating a ratio of the product of the two numbers. In general, the higher the portfolio's up-market capture ratio, the better the portfolio participated in an up market.

Index Definitions

Barclays Capital U.S. Aggregate Bond Index. The Barclays Capital U.S. Aggregate Bond Index covers the U.S. dollar-denominated, investment-grade, fixed-rate and taxable bond market of SEC-registered securities. The index includes bonds from the Treasury, government-related, corporate, mortgage-backed security (agency fixed-rate and hybrid ARM pass-throughs), asset-backed security and collateralized mortgage-backed security sectors. The index is a component of the U.S. Universal Index in its entirety. The index was created in 1986, with index history backfilled to January 1, 1976.

CBOE S&P 500 BuyWrite Index. The index is a passive total return index based on (1) buying an S&P 500 Index portfolio, and (2) “writing” (or selling) the near-term S&P 500 Index “covered” call option, generally on the third Friday of each month. The call written will have about one month remaining to expiration, with an exercise price just above the prevailing index level (i.e., slightly out of the money). The call is held until expiration and cash is settled, at which time a new one-month, near-the-money call is written.

DB G10 Currency Harvest Index. The index is comprised of currency futures contracts on certain G10 currencies and is designed to exploit the trend that currencies associated with relatively high interest rates, on average, tend to rise in value relative to currencies associated with relatively low interest rates. Currently, the G10 currency universe from which the index selects includes U.S. dollars, euros, Japanese yen, Canadian dollars, Swiss francs, British pounds, Australian dollars, New Zealand dollars, Norwegian krone and Swedish krona.

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HFRX Convertible Arbitrage Index. The HFRX Convertible Arbitrage Index is constructed based on a sophisticated methodology utilizing cluster analysis, correlation analysis and optimization in an attempt to provide a representation of the convertible arbitrage universe. Convertible arbitrage includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a convertible fixed income instrument. Strategies employ an investment process designed to isolate attractive opportunities between the price of a convertible security and the price of a non-convertible security, typically of the same issuer. Convertible arbitrage positions maintain characteristic sensitivities to credit quality, the issuer, implied and realized volatility of the underlying instruments, levels of interest rates and the valuation of the issuer's equity, among other more general market and idiosyncratic sensitivities.

HFRX Merger Arbitrage Index. The HFRX Merger Arbitrage Index is constructed based on a sophisticated methodology utilizing cluster analysis, correlation analysis and optimization in an attempt to provide a representation of the merger arbitrage universe. Merger arbitrage strategies employ an investment process primarily focused on opportunities in equity and equity-related instruments of companies that are currently engaged in a corporate transaction. Opportunities are frequently presented in cross-border, collared and international transactions that incorporate multiple geographic regulatory institutions, which typically involve minimal exposure to corporate credits.

Ibbotson Intermediate-Term Government Total Return. Total returns for the 1987–present period are calculated from *The Wall Street Journal* prices. Using the coupon accrual method, total returns are calculated as the change in the flat or “and-interest” price. The flat price is the average of the bid and ask prices plus the accrued coupon. The accrued coupon is equal to zero on the day a coupon is paid, and increases over time until the next coupon payment. As with long-term government bonds, one-bond portfolios are used to construct the intermediate-term index. The bond chosen each year is the shortest noncallable bond with a maturity of not less than five years, and is “held” for the calendar year. Returns over 1934–1986 are obtained from the CRSP Government Bond File. Over 1926–1933, there are few bonds suitable for construction of a series with a five-year maturity. For this period, five-year bond yield estimates are used. These estimates are obtained from Thomas S. Coleman, Lawrence Fisher and Roger G. Ibbotson, *Historical U.S. Treasury Yield Curves: 1926–1992 with 1994 update* (Ibbotson Associates, Chicago, 1994).

International Dividend Achievers Index. The International Dividend Achievers Index is designed to track the performance of dividend-paying ADRs and non-U.S. common or ordinary stocks trading on the NYSE, the NASDAQ or the AMEX. To become eligible for inclusion in the International Dividend Achievers Index, a company's aggregate annual regular dividend payments must have increased consistently over the course of the last five calendar or fiscal years.

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MSCI EAFE Index. The MSCI EAFE (Europe, Australasia and the Far East) Index (net of taxes) is a free-float-adjusted market-capitalization index that is designed to measure developed market equity performance, excluding the U.S. and Canada. As of June 2006, the MSCI EAFE Index consisted of the following 21 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom. The index is net because dividends are reinvested after deducting a withholding tax from dividend distributions. Since taxes are withheld from the MSCI EAFE Index (net of taxes), the performance of the MSCI EAFE Index (net of taxes) will generally be lower than that of the MSCI EAFE Index (gross of taxes).

MSCI World Index. The MSCI World Index is a free-float-adjusted market-capitalization index that attempts to measure global developed market equity performance. The index includes a selection of stocks from all of the developed markets in the world, as defined by MSCI. This index includes securities from 23 countries.

Russell Midcap Index. The Russell Midcap Index measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 30% of the total market capitalization of the Russell 1000 Index.

Russell 2000 Index. The Russell 2000 Index is an unmanaged index generally considered to be representative of the small-cap segment of the market. It measures the performance of the 2,000 smallest companies in the Russell 3000[®] Index. The Russell 2000 Index represents approximately 8% of the total market capitalization of the Russell 3000 Index.

S&P 500 Index. The S&P 500 Index includes 500 of the largest stocks (in terms of stock market value) in the U.S.; prior to March 1957, it consisted of 90 of the largest stocks. Although the S&P 500 focuses on the large-cap segment of the market, with approximately 80% coverage of U.S. equities, it is also used as a reliable proxy for the total U.S. equity market.

S&P 500 Dividend Aristocrats Index. The S&P 500 Dividend Aristocrats Index is designed to measure the performance of S&P 500 Index constituents that have followed a policy of consistently increasing dividends every year for at least 25 consecutive years. This index is a member of the S&P Dividend Aristocrats Index series.

S&P Global Consumer Staples BMI Index. The index is a subset of the Standard & Poor's Global 1200 Index. The index includes manufacturers and distributors of food, producers of non-durable household goods and food and drug retailing companies. With the exception of the U.S., all companies are float adjusted, and reconstitution is a continual process.

S&P Global Health Care BMI Index. The index is a subset of the S&P Global 1200 Index. The index includes health care providers, biotechnology companies, and manufacturers of medical supplies, and advanced medical devices and pharmaceuticals. With the exception of the U.S., all companies are float adjusted, and reconstitution is a continual process.

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S&P Global Utilities BMI Index. The index is a subset of the S&P Global 1200 Index. The index includes electric, gas or water utilities, or companies that operate as independent producers and/or distributors of power. With the exception of the U.S., all companies are float adjusted, and reconstitution is a continual process.

S&P DTI Index. The S&P Diversified Trends Indicator (S&P DTI) Index is an investable long/short strategy that can benefit from trends (in either direction) in the global futures markets. It consists of 24 futures contracts, with a 50% weighting in financial futures (e.g., interest rates and currencies) and a 50% weighting in commodities futures (softs, energy, metals, etc.). S&P also offers financials-only and commodities-only subsets of the S&P DTI, providing a flexible way to tailor exposure to these respective asset classes.

S&P REIT Index. The S&P REIT Index defines and measures the investable universe of publicly traded U.S. real estate investment trusts. It aims to represent an accurate measure of the REIT equity market, reflecting the risk and return characteristics of this broad universe on an ongoing basis.

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Ideas Without Limits

This white paper is part of a program designed to help investment professionals and financial services firms identify trends, enhance operations and grow revenue. It represents Pershing's unique approach to practice management support—going beyond high-level guidance to offer actionable information, personalized consulting and ready-to-execute programs.

To learn more about Lockwood Advisors, Inc., please contact the Business Development Team at (800) 200-3033, option 2.

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It is important to remember that there are risks inherent in any investment and that there is no assurance that any money manager, asset class, style or index will provide positive performance over time. The investment return and principal value of an investment will fluctuate, so that an investor's shares, when redeemed, may be worth more or less than their original cost.

Diversification and strategic asset allocation do not guarantee a profit nor protect against a loss in declining markets.

The performance data quoted represents past performance and does not guarantee future results. Current performance may be lower or higher than the performance data quoted. The investment return and principal value of an investment will fluctuate, so that an investor's shares, when redeemed, may be worth more or less than their original cost.

The statistical data contained herein has been obtained from sources believed to be reliable, but we cannot guarantee their accuracy.

The information on indices is presented for illustrative purposes only and is not intended to imply the potential performance of any fund or investment. Index performance assumes the reinvestment of all distributions, but does not assume any transaction costs, taxes, management fees or other expenses. Indices are not available for direct investment.

Investors should carefully consider the investment objectives, risks, charges, fees and expenses of any mutual fund, exchange-traded fund (ETF) or exchange-traded note (ETN) before investing. This and other important information can be found in the fund/note prospectus, which may be obtained through your financial advisor or by calling the fund/issuer or by visiting the fund's/issuer's website. Please read each fund's/note's prospectus carefully before investing.

Portfolios that invest in fixed income securities are subject to several general risks, including interest rate risk, credit risk and market risk, which could reduce the yield that an investor receives from his/her portfolio. These risks may occur from fluctuations in interest rates, a change to an issuer's individual situation or industry, or events in the financial markets.

Foreign investments are subject to risks not ordinarily associated with domestic investments, such as currency, economic and political risks, and may follow different accounting standards than domestic investments.

Investments in emerging or developing markets involve exposure to economic structures that are generally less diverse and mature, and to political systems that can be expected to have less stability than those of more developed countries. Securities may be less liquid and more volatile than U.S. and longer-established non-U.S. markets.

An investment in small/mid capitalization companies involves greater risk and price volatility than an investment in securities of larger capitalization, more established companies.

Portfolios that invest in real estate investment trusts (REITs) are subject to many of the risks associated with direct real estate ownership and, as such, may be adversely affected by declines in real estate values and general and local economic conditions.

Portfolios that invest a significant portion of assets in one sector or industry, or in related industries, may involve greater risks, including greater potential for volatility, than more diversified portfolios.

Investments in intermediate- and long-term Treasury securities involve interest rate risk and inflation risk, which could reduce the value or real return of an investment should interest rates rise.

Certain mutual funds, ETFs and/or ETNs (together, Funds) employ the use of alternative investment strategies, which are not for everyone and entail risks that are different from more traditional investments. Alternative investments are intended for sophisticated investors and involve a high degree of risk, including the potential for loss of some or all principal. When considering alternative investments, you should consider various risks, including the fact that some alternative investment products provide limited liquidity and include, among other things, the risks inherent in investing in securities and derivatives, using leverage and engaging in short sales. An investment in an alternative investment product or strategy is speculative and should not constitute a complete investment program. A variety of alternative investment strategies may be utilized in certain Funds, including but not limited to: managed futures, currency carry, merger arbitrage, convertible arbitrage and commodities. Each strategy carries its own unique risks, which are more fully explained in the applicable Fund prospectus. Please read each Fund's prospectus carefully before investing.

Funds that employ managed futures strategies typically utilize derivatives, such as futures, options, structured notes and swap agreements, which provide exposure to the price movements of a commodity (i.e., oil, grain, livestock) or a financial instrument (i.e., currency, index). This may expose the Fund to additional risks that would not be present had the Fund invested directly in the securities underlying those derivatives. Funds that invest in commodity-linked derivatives may be subject to greater volatility, as the value of those derivatives may be affected by overall market movements, changes in interest rates, and other factors such as weather, disease, embargoes, and international economic and political developments, as well as the trading activity of speculators and arbitrageurs in the underlying commodities. This strategy may cause the Fund to invest a significant portion of assets in the securities of a single issuer. Changes in the market value of the issuer's securities may result in greater volatility than would otherwise occur in a more diversified Fund, thus increasing the potential for greater investment loss. Funds that employ managed futures strategies may purchase shares of other pooled investments, such as ETFs. In addition to its own expenses, the Fund will also bear a portion of the ETF's expenses, which may negatively impact performance. A highly liquid secondary market may not exist for certain derivatives utilized by this strategy, and there can be no assurances that one will develop.

Funds that employ currency carry strategies seek to benefit from changes in the relative valuations of one currency to another currency, primarily through the buying and selling of over-the-counter (OTC) derivatives, such as currency spot, forward and non-deliverable forward contracts. This strategy may involve significant risk, as there is no exchange on which to trade over-the-counter derivatives and no standardization of contracts, which may make it difficult or impossible to value or liquidate an open position. The relationship between different currencies may be highly volatile, and transactions involving foreign currencies may entail risks not common to investments denominated entirely in a person's domestic currency. Such risks include the risks of political or economic policy changes in the foreign nation; the stability of foreign governments, banking systems and economies; the performance of global stock markets; interest rate levels; inflation; and any other conditions that may substantially and permanently alter the conditions, terms, marketability or price of a foreign currency. The market for some currencies may, at times, experience low trading volume and become illiquid, thus subjecting the Fund to added risk, including the potential for substantial loss.

Funds that employ merger arbitrage strategies seek to capitalize on "event"-driven situations, such as announced mergers, acquisitions and reorganizations, by purchasing the securities of companies that have agreed to be acquired by another company. This strategy involves risks, including the risk that the merger or similar transaction will not occur, will be renegotiated at a less attractive price, or may take longer than expected to be completed, which may cause the price of the company's securities to decline significantly. Funds that employ merger arbitrage strategies may experience significant portfolio turnover, generally resulting in additional transaction costs that may negatively impact Fund performance. Funds may also invest in the securities of a limited number of companies, whereby a decline in the value of any one security may have a greater impact on the Fund's share price. This may result in increased volatility over a more diversified Fund and the potential for greater investment loss.

Funds that employ convertible arbitrage strategies seek to generate income by purchasing convertible securities and then selling short the securities' underlying stock. Investing in convertible securities involves risks, including the risk that the company issuing the debt security will be unable to repay principal and interest (default risk), and the risk that the debt security will decline in value if interest rates rise (interest rate risk). Convertible securities are subject to price fluctuations and may gain or lose value if sold prior to maturity. A majority of convertible securities trade on the over-the-counter market, which may make them more illiquid than other investments. Short selling involves significant risk, as an increase in the value of borrowed securities between the date of the short sale and the date the borrowed security is replaced may expose the Fund to unlimited loss.

Commodities are assets that have tangible properties, such as oil, metals and agricultural products. Funds that invest in commodities and commodity-linked securities may be affected by overall market movements, changes in interest rates and other factors, such as weather, disease, embargoes, and international economic and political developments, as well as the trading activity of speculators and arbitrageurs in the underlying commodities. Funds that invest in commodities or commodity-linked securities may not be suitable for all investors. The potential for a commodity-linked security to use derivative instruments, such as futures, options and swap agreements, to achieve its investment objective may create additional risks that would not be present in the underlying securities themselves, thus raising the potential for greater investment loss.

Funds that engage in the selling (or writing) of covered calls may involve a high degree of risk and may not be suitable for all investors. The upside potential if an option is exercised is limited to the premium received plus the difference between its strike price and the stock purchase price. If the option is not exercised and expires out-of-the-money and with no value, the upside potential is any gain in share value plus the premium received. On the downside, limited protection is provided by the premium received from the call's sale. The loss potential may be substantial and is limited only by the stock declining to zero. In addition to the Fund prospectus, investors should read and understand the risks associated with options prior to engaging in any covered call strategy. These risks are more fully described in the booklet entitled "Characteristics and Risks of Standardized Options," which can be accessed at www.optionsclearing.com.

For more information about Lockwood, as well as its products, fees and services, please refer to the ADV Part II, Schedule H, which may be obtained by writing to Lockwood at: 10 Valley Stream Parkway, Malvern, PA 19355, or by calling (800) 200-3033.

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