JULEX CAPITAL MANAGEMENT

ADAPTIVE INVESTING

Adaptive Investment Approach™

The two deep bear markets in the first decade of the 21st century challenged conventional investment wisdoms such as Efficient Market Hypothesis (EMH) and Modern Portfolio Theory (MPT). Many of the assumptions behind EMH and MPT, such as linear positive relationship between risk and return, stable volatility and correlation over time, proved to be questionable. In addition, some of the common investment management practices have also proved to be suboptimal.

BUY-AND-HOLD SUFFERS OCCASIONAL SEVERE LOSSES.

One of the applications of EMH is so-called buy-and-hold strategy, which excludes any attempt of market timing. If the securities are fairly priced all the time, there is no point to trade. The biggest drawback of the strategy is that it will suffer occasional deep drawdowns which destroy not only investors' wealth, but also their confidence in taking risks again when the market becomes normal. The bear markets in 2000-2003 and 2007-2009 proved disastrous for buy-and-hold strategies. Table 1 shows the historical severe market downturns.

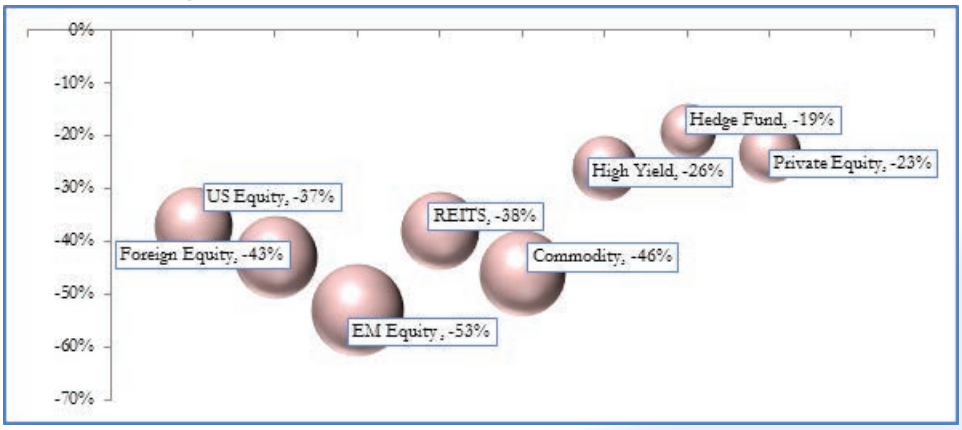
Table 1: Historical Severe Market Downturns (as of 12/31/2015)

Market Index	Event	Begin	End	Loss	Time to Recover
S&P 500 Index	Great Depression	Aug-1929	Jun-1932	-86%	22 years
S&P 500 Index	Oil Crisis	Dec-1972	Sep-1974	-46%	6 years
S&P 500 Index	Internet Bubble Burst	Mar-2000	Feb-2003	-44%	5 years
S&P 500 Index	Subprime Crisis	Oct-2007	Feb-2009	-53%	4 years
Nasdaq Index	Internet Bubble Burst	Mar-2000	Oct-2015	-81%	15 years
Nikkei Index	Housing Bubble Burst	Dec-1989	-78%		51% Below Peak

DIVERSIFICATION IS NOT EFFECTIVE DURING MARKET DISTRESS.

The idea of diversifying a portfolio into different asset classes, different sectors or different securities is a good idea when the markets behave normally. However, during the market turbulence when correlations are high, diversification may not be effective. During the financial crisis, most of the asset classes including hedge funds suffered significant losses, there was no place to hide (see Figure 1).

Figure 1: Asset Class Performance in 2008



BENCHMARK-CENTRIC INVESTMENT APPROACH DOES NOT PROVIDE ENOUGH PROTECTION DURING THE MARKET DOWNTURNS.

The goal of the benchmark-centric investment approach is for investment managers to outperform the market benchmarks with the lowest tracking error. In the bear markets, the benchmark-centric strategies struggle as the market benchmark declines.

UPSIDE PARTICIPATION DOWNSIDE MANAGEMENT

As an alternative, the Adaptive Market Hypothesis (AMH), proposed by MIT professor Andrew Lo, is an attempt to combine the rational principles based on the efficient market hypothesis with the irrational principles of behavioral finance. Under AMH, the market efficiency is not an all-or-nothing condition, but a constantly adaptive process of moving from market inefficiency to efficiency. As a result, there exist opportunities for arbitrage and market timing. Thus AMH allows macro factors and human sentiment in driving market returns.

The concept of Adaptive Investment Approach (AIA) is used to describe the investment strategies that under which investors can constantly adjust their investments to reflect market conditions such as economic regimes, ongoing market return or market volatility. The goal of the approach is to deliver consistent returns regardless of the market environments by adapting to the ever-changing market conditions. There are three different ways to develop adaptive investment strategies:

(1) Adaptive Regime Approach. This approach is aiming to identify market regimes and invest accordingly. For example, in the bull market, investor over-weigh equities and other risky assets; in the bear market, investors over-weigh Treasuries and cash to preserve capital. Regime-based investments fall into this category.

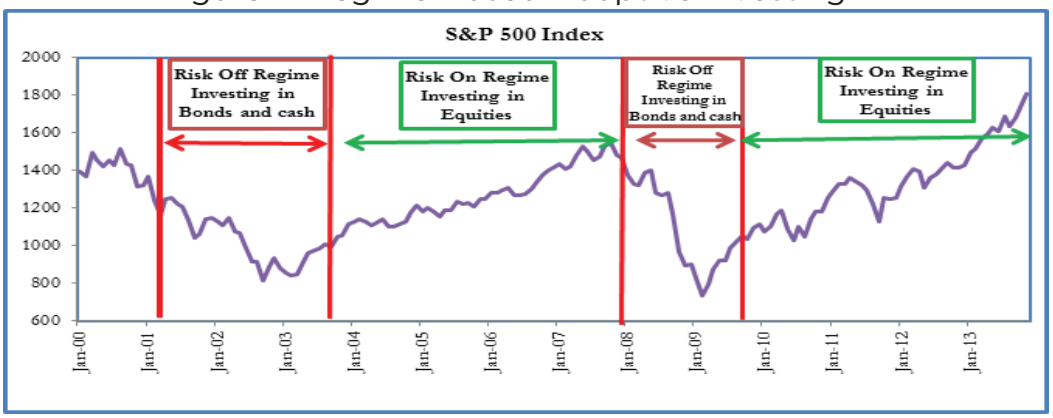
(2) Adaptive Return Approach. This approach is aiming to adapt investments to ongoing market performance such as market returns. The objective is to find market trends and then ride on them. Momentum and trend-following strategies fall into this category.

(3) Adaptive Risk Approach. Investment strategies can be also adapted to changing market volatility. The goal is to adjust the portfolio risk exposures when market volatility changes. In the heightened risk environment, this approach has the ability of reducing risk exposures. Some of the portfolio construction methods such as risk parity, volatility-weighted portfolio, and risk-targeting fall into the adaptive risk category.

The adaptive investment approach has the potential to deliver attractive returns by participating in rising markets as well as protecting capital by limiting the market risks. Ideally a comprehensive investment process will incorporate all three adaptive approaches in an attempt to optimize market exposure in all market environments.

Figure 2 shows an example on how an adaptive regime strategy works.

Figure 2: Regime-Based Adaptive Investing



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