

Asset Allocation in the New Economic Environment



Date: June 9, 2010

Presented by: Wayne A. Wicker, CFA

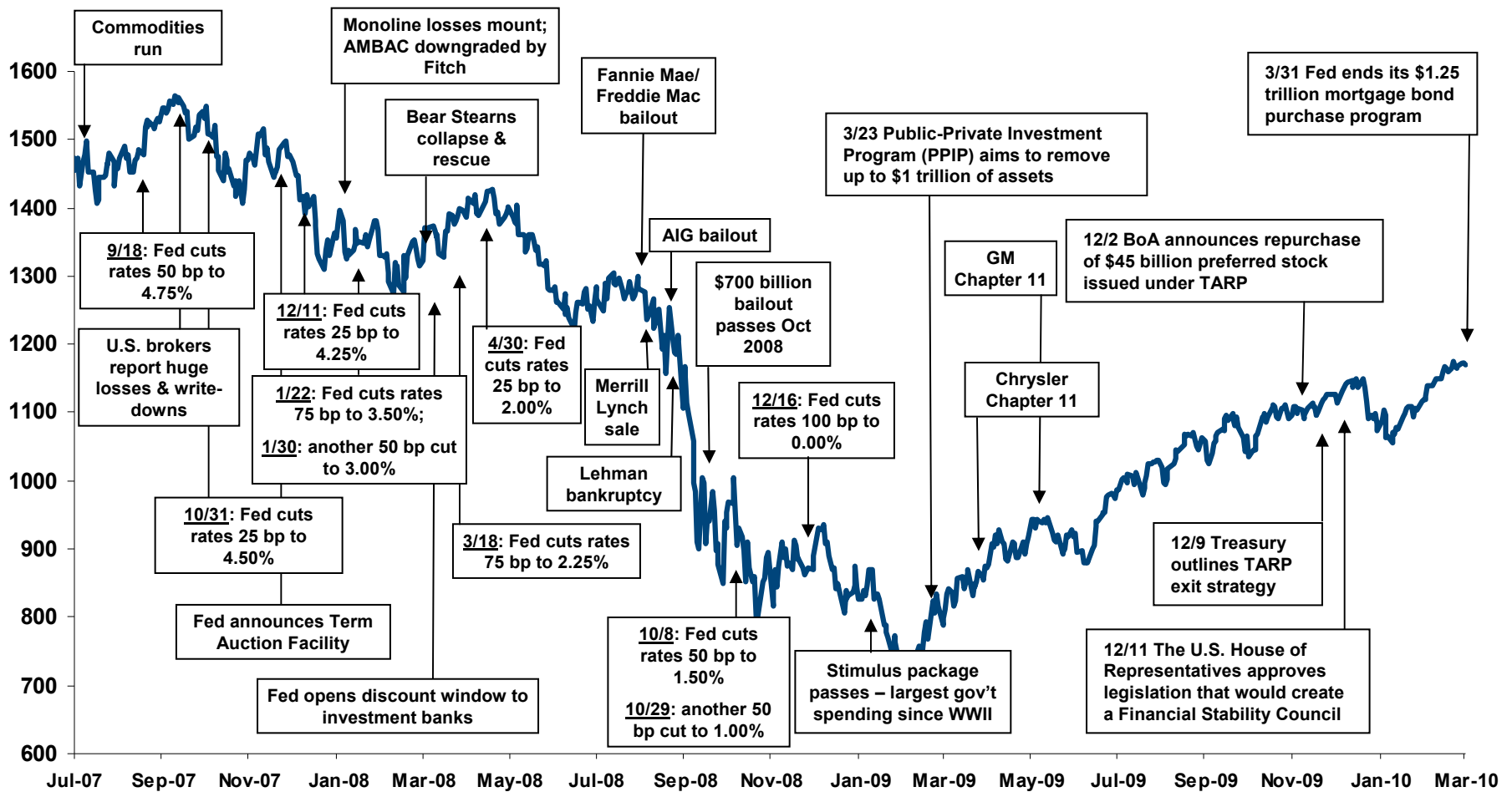
Senior Vice President, Chief Investment Officer

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AC: 0610-4006

S&P 500 & Selected Events

As of March 31, 2010



Source: Bloomberg

Past performance is no guarantee of future results. Chart is for illustrative purposes only.

For 376 Pension Fund sponsors in the S&P 500 Index

- Median Funding Ratio in 2000 was 122%
- Median Funding Ratio for these Funds fell to 72% in 2008
- 13% of companies fell into the most serious category of large poorly funded plans – less than 75% funded and pension obligations that total more than 40% of market capitalization

How Did a Diversified* Portfolio Perform during the Recent Bear Market?

	Average Return for 2008
Individual 401K	-31%
S&P 500 Index	-37%
60/40 Balance**	-22%

Past performance is no guarantee of future results.

Source: Vanguard

* Diversification does not protect an investor from market risks and does not assure a profit.

** 60% S&P 500 Index / 40% BarCap Aggregate

Impact on Typical 401K Plans

	Median Account Balance	Increase / Decrease
2006	\$25,953	
2007	25,196	-3%
2008	17,399	-31%
2009	23,140	33%

Past performance is no guarantee of future results.

Source: Vanguard

AARP surveyed people age 45-64 who are still working. Here are some ways they are saving for retirement:

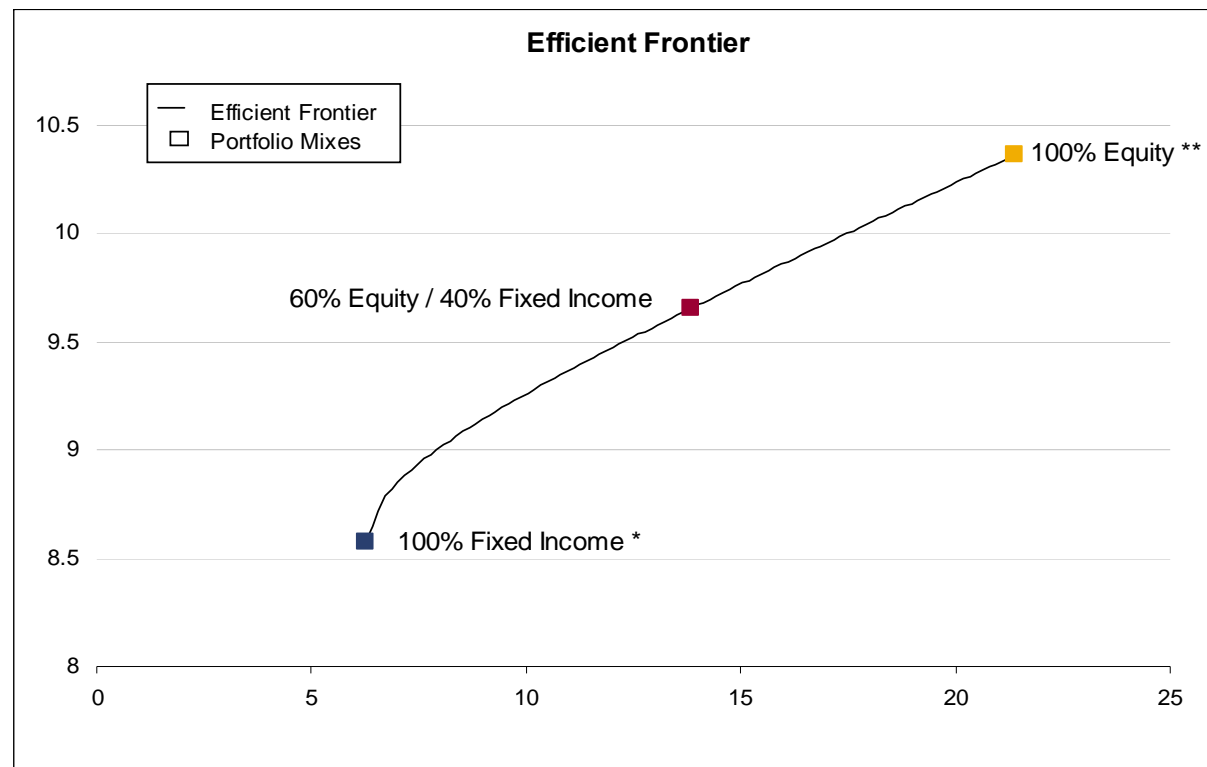
- 19% have increased the number of hours they are working
- 17% are cutting back on medications
- 40% intend to delay retirement by four or more years*
- 55% are postponing travel
- 68% are reducing spending on entertainment

Source: Center for Retirement
Research at Boston College:
Investment News 5/3/10

* Survey question applied to people age 45-59 only

Have the basic concepts of diversification changed?

- Early academic work – Build portfolios with uncorrelated assets for higher return/risk profile



Problem – Strategy failed in 2008 partially due to convergence of correlations

* Fixed Income represented by the Barclays Capital Aggregate Bond Index. *Past performance is no guarantee of future results.*

** Equity represented by the S&P 500 Index.

1) Multiple Time Horizons

- For Pension Funds – Asset/Liability matching
- For Individuals – Wealth Accumulation stage & Longevity/Payout stage

2) Re-define Diversification goals

- Asset type
- Liquidity Potential
- Level of Risk

- Investors do not have a single investment horizon. They have multiple investment horizons at the same time.
- Every long term investor is also a medium term investor and a short term investor
- The total portfolio consists of different sub-portfolios each with a different time horizon

Applying a Multiple Time Horizon Structure for Institutional Funds

	Segment I	Segment II	Segment III
Time Horizon	0-36 month payouts	3-10 years	>10 years
Return Objective	Low	Moderate	High
Risk Tolerance	Low	Moderate	Above Average

Applying a Multiple Time Horizon Structure for Individuals

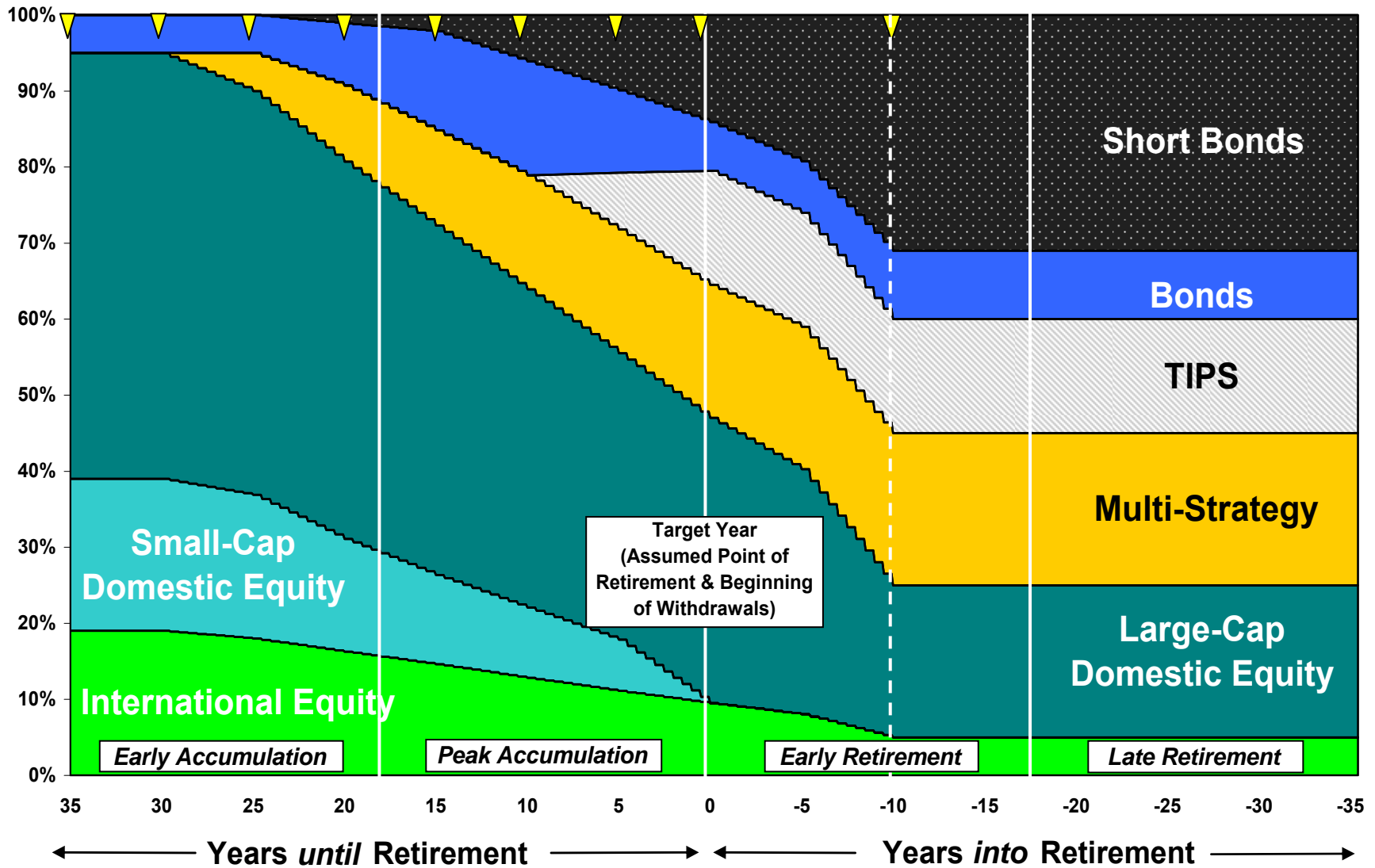
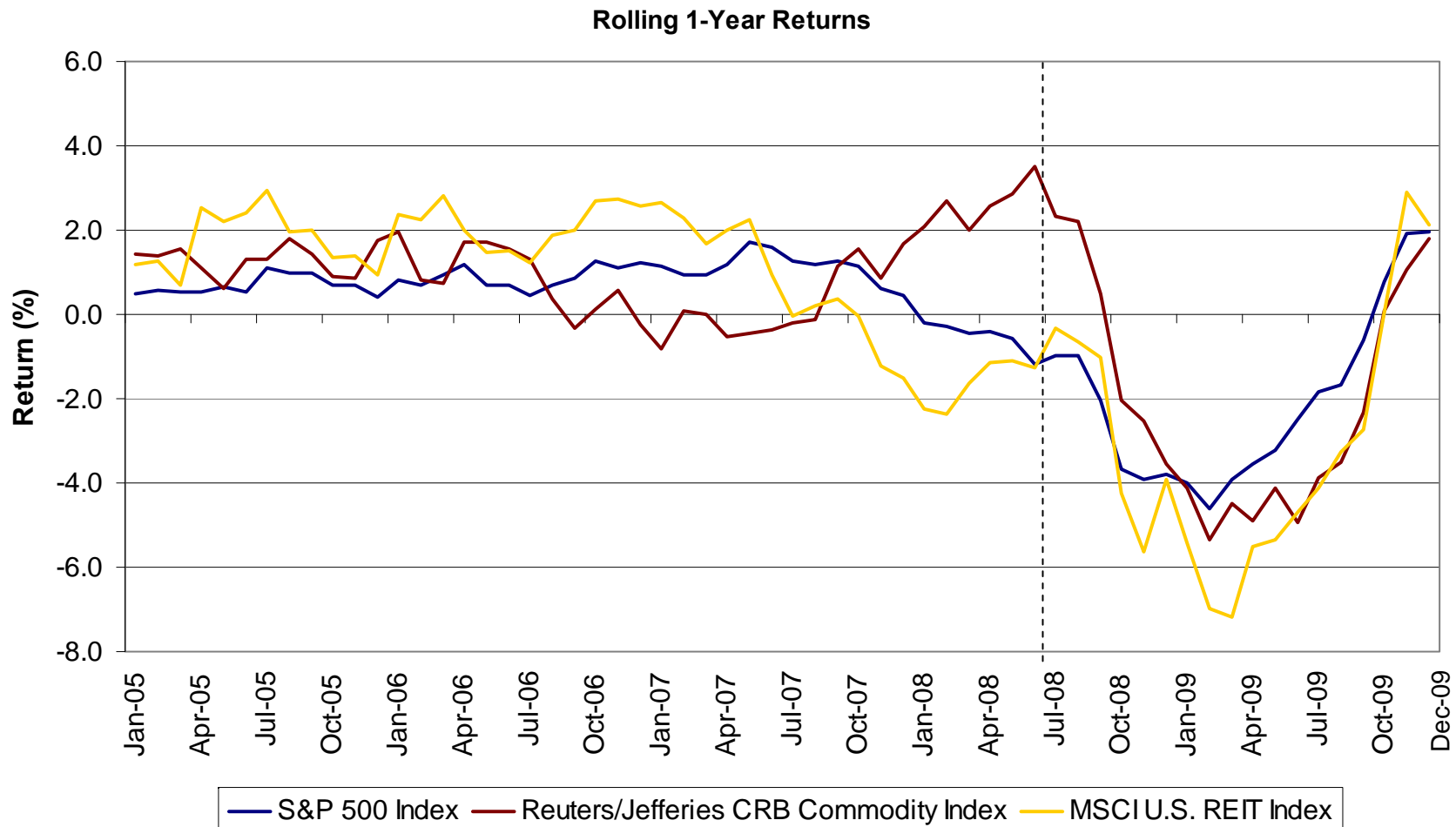


Chart is for illustrative purposes only.

- Correlations among asset classes remain constant
- Assets can be bought/sold on demand at predetermined/desired price
- Asset classes remain equally risky at all stages of economic cycle

Have the Basic Concepts of Diversification changed?

- Asset classes that historically demonstrated low correlation of returns have not recently provided diversification benefits

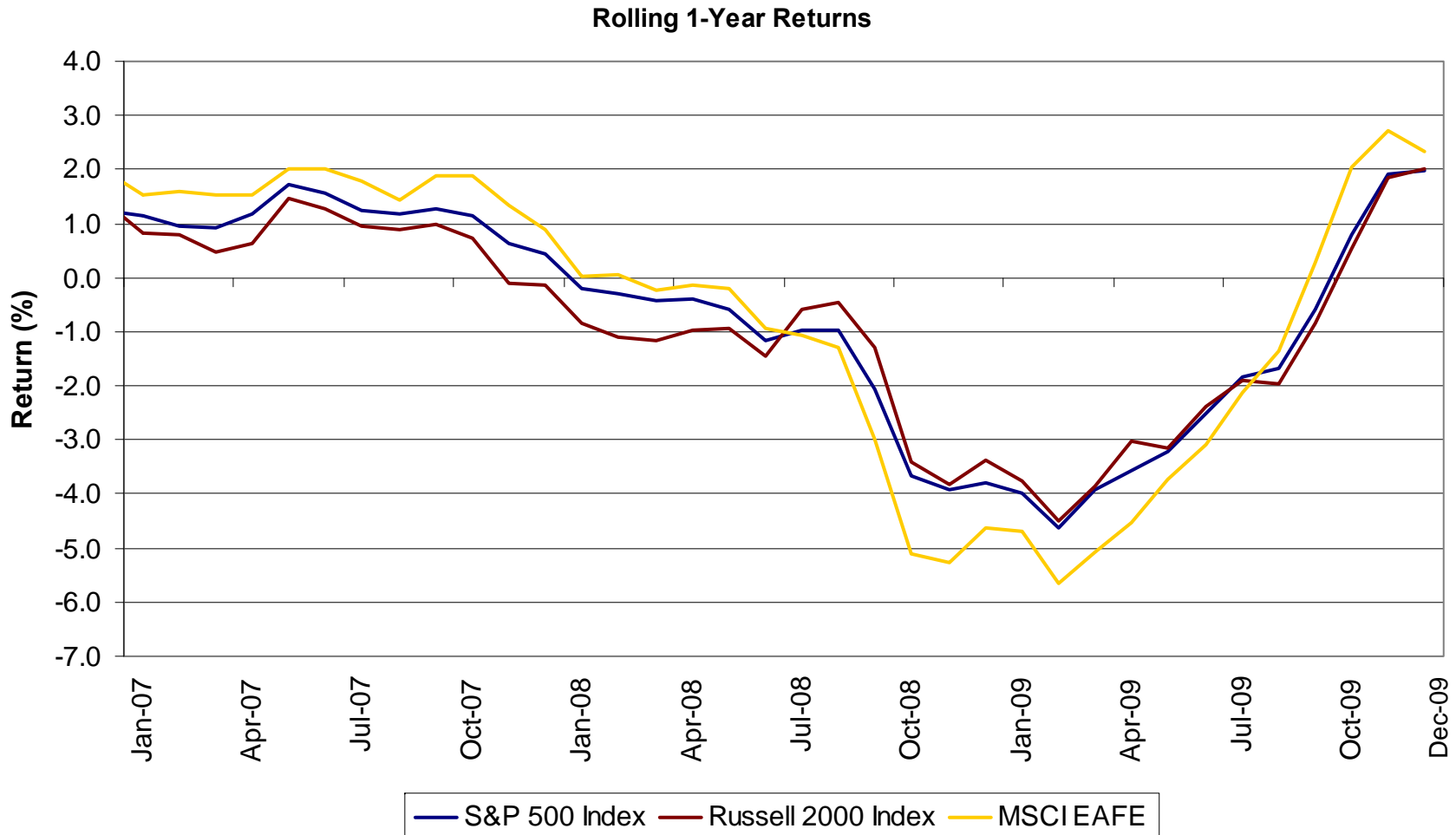


Source: Ibbotson

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Rethinking Asset Allocation

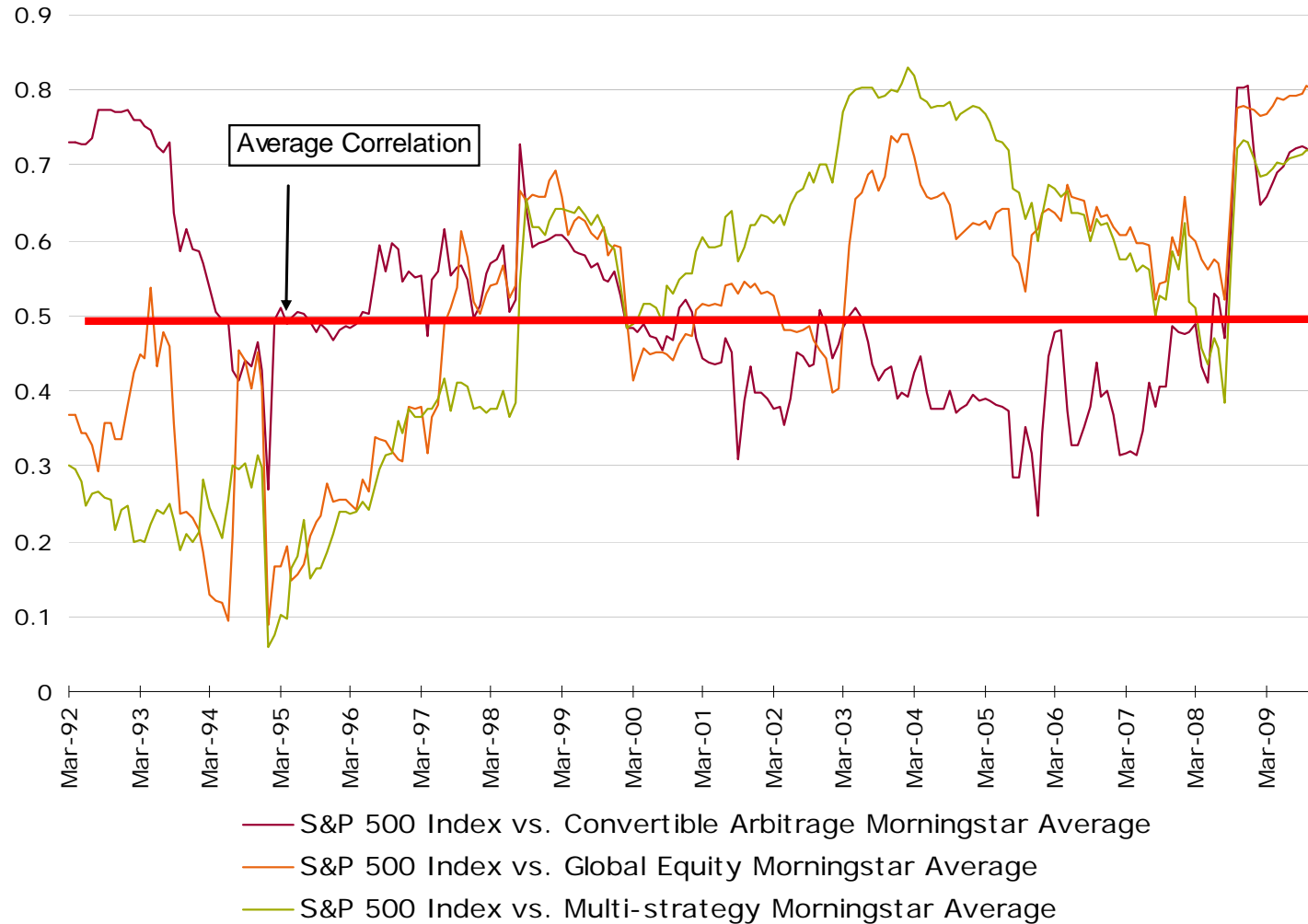
- Attempts to build portfolios using sub-sectors of these asset classes failed to perform as expected in 2008 market downturn



Source: Ibbotson

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Rolling 3 Year Correlations

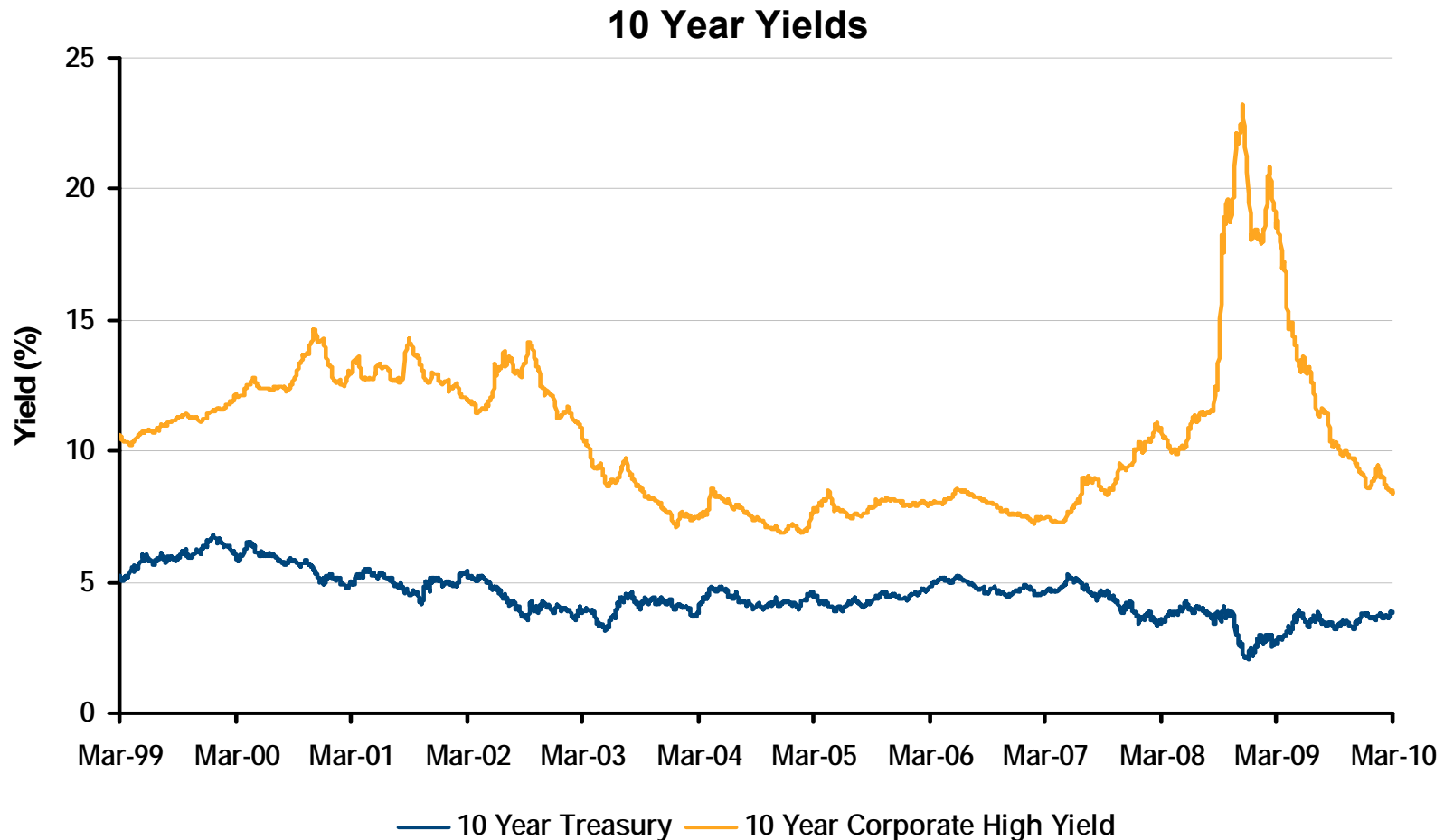


Source: Ibbotson

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MPT accounts for risk in terms of price movements

- “Everything can be bought/sold at a given price whenever an investor chooses”

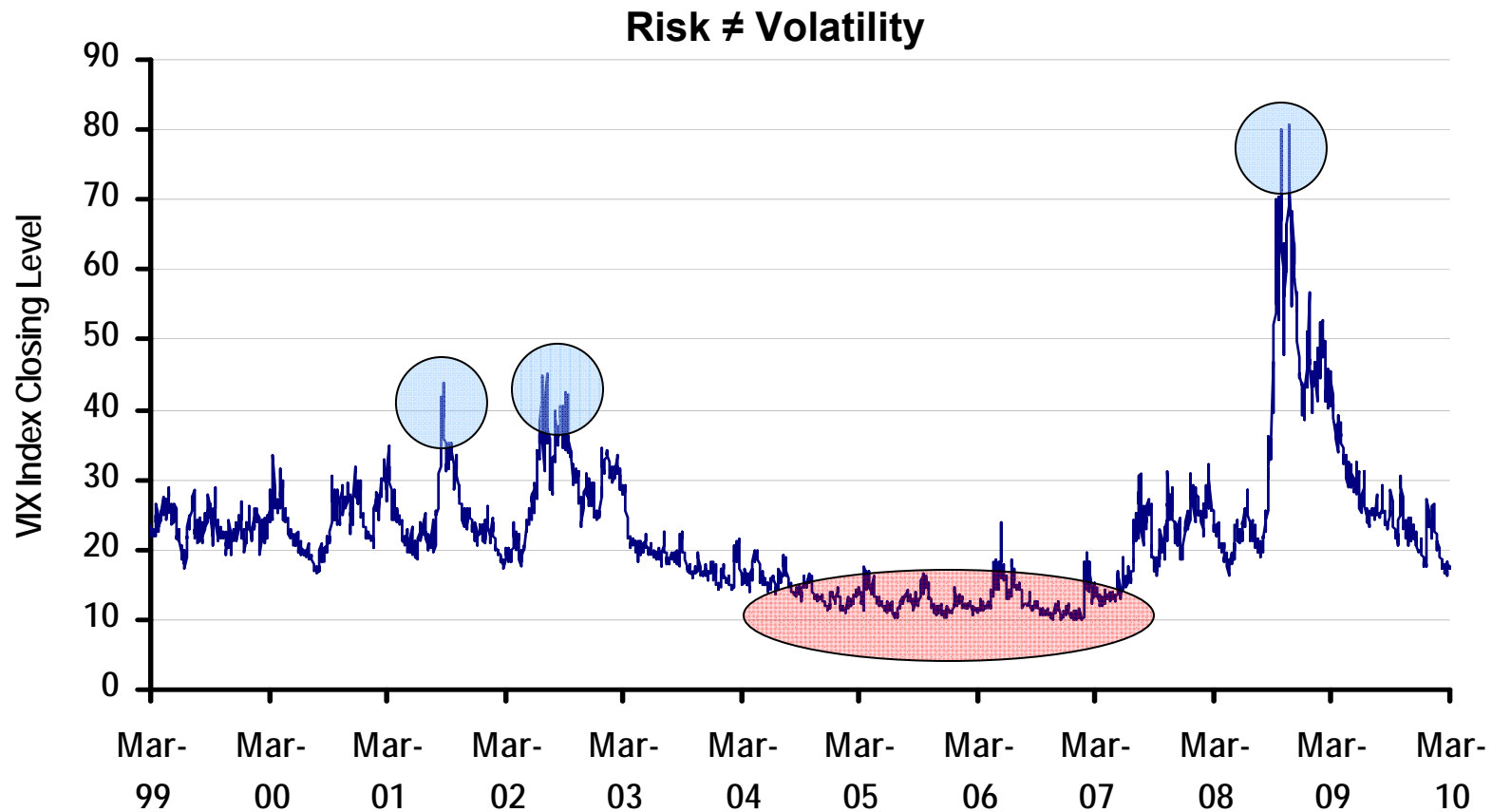


Source: Bloomberg

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MPT implies that an asset class is equally risky at all times

- Risk is measured in terms of standard deviation or variance of returns



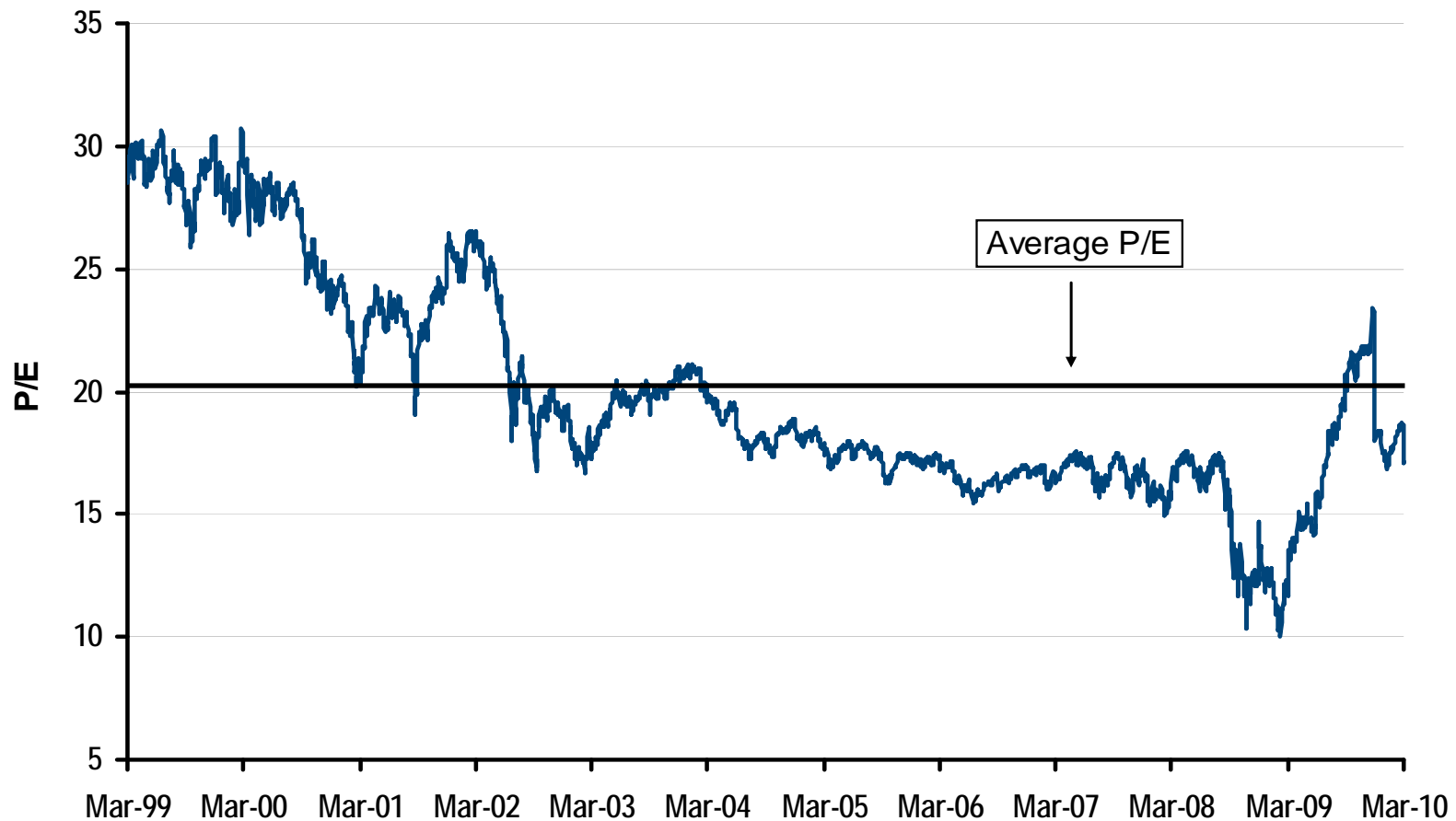
Source: Bloomberg

The Chicago Board of Options Exchange Volatility Index ("VIX") is a commonly used measure of the market's expectation of volatility risk over the next 30-day period. A high VIX level is generally associated with a period of increased volatility and uncertainty in the market, while a lower level corresponds to less volatility and stress in the market.

Past performance is no guarantee of future results. Chart is for illustrative purposes only.

Observation – Asset classes may not be equally risky throughout a market cycle

P/E for the U.S. Market*



Source: Bloomberg

* U.S. Market represented by the S&P 500 Index.

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Have the basic concepts of diversification changed?

- Asset classes that historically demonstrated low correlation of returns have not recently provided diversification benefits
- Attempts to build investment portfolios using sub-sectors of these asset classes failed to perform as expected in 2008 market downturn

- Asset classes often evaluated along a single spectrum for portfolio construction (Cash, Equities, Venture Capital)
- What about multiple allocations associated with independent factors impacting investment choices
 - Asset Type
 - Liquidity Characteristics
 - Level of Risk

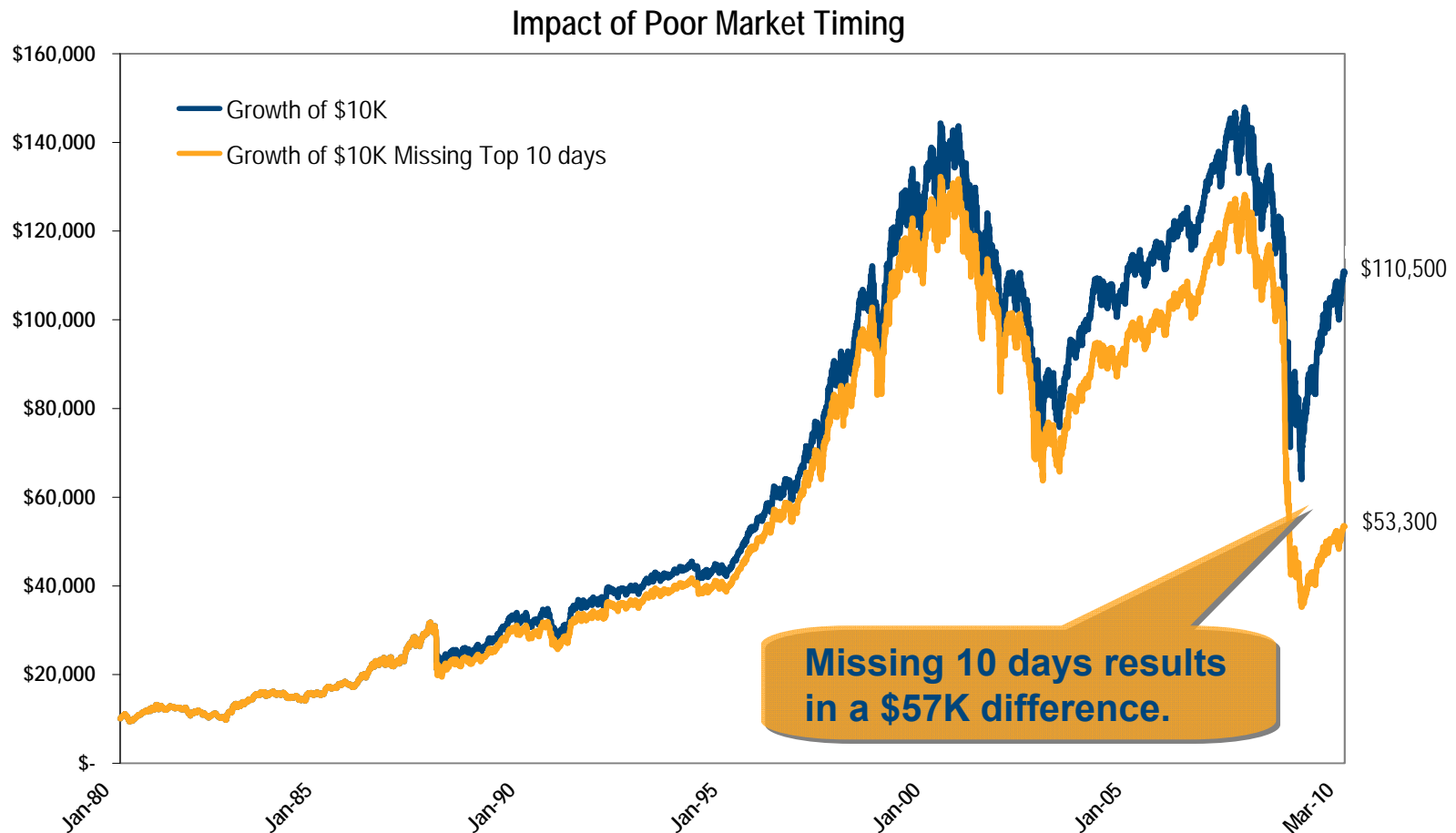
- Too much time spent on allocating among highly correlated investments (Public vs Private equity, Domestic vs International)
- Asset Allocation should focus on truly differentiated performance patterns
 - Equity
 - Fixed Income
 - Absolute Return
 - Real Assets

- Each asset class will have a range of liquidity characteristics and related return premiums
- In each distinct asset class there will be an opportunity to classify opportunities by prospective liquidity (U.S. Large Caps vs Emerging Markets)

- Investors can define risk on many levels
 - Defined Benefit plans may consider factors such as benefit payments/funding ratios, value at risk calculations, and issuer exposure
 - Individuals within a defined contribution plan might consider asset accumulation targets and longevity risks

What Has Not Changed in the New Economic Environment

- In the short run, the market will continue to be driven by greed and fear
- However, over the long run, time in the market rather than timing the market should continue to work to your advantage



Source: Bloomberg. 10 best days based on daily % change.

Past performance is no guarantee of future results. Chart is for illustrative purposes only.

- Recent market activity reminds investors that there are a number of risks that must be considered in managing portfolios
- Emphasis on long term goals and opportunities for educating participants on investment basics is very important
- Consideration of alternative portfolio construction concepts may yield additional insights in pursuit of improving risk adjusted investment performance



Gwinnett County, Georgia

Asset Allocation in the New Economic Environment
Wednesday, June 9, 2010
Session Time: 8:30-10:10 am



Asset Allocation- Today's Discussion

Today's Discussion

- Definition & Purpose
- Lessons Learned - 2008 & 2009
- Results of Pension Risk Study by Hewitt
- Methods to Manage Risk



Asset Allocation- Who Cares? Cartoon #2

MCHUMOR.com by T. McCracken





Asset Allocation – Definition & Purpose

Definition:

- Asset allocation is the strategy used in choosing between the various kinds of possible investments, in other words, the strategy used to choose in what asset classes such as stocks and bonds one wants to invest.

Purpose:

- Tradeoff between Return versus Risk



Risk Versus Return-Typical Returns

Projected 10 year cumulative return after inflation (stock return 8% yearly, bond return 4.5% yearly, inflation 3% yearly)

80% stock / 20% bond	52%
70% stock / 30% bond	47%
60% stock / 40% bond	42%
50% stock / 50% bond	38%
40% stock / 60% bond	33%
30% stock / 70% bond	29%
20% stock / 80% bond	24%



Risk Versus Return in Bear Markets

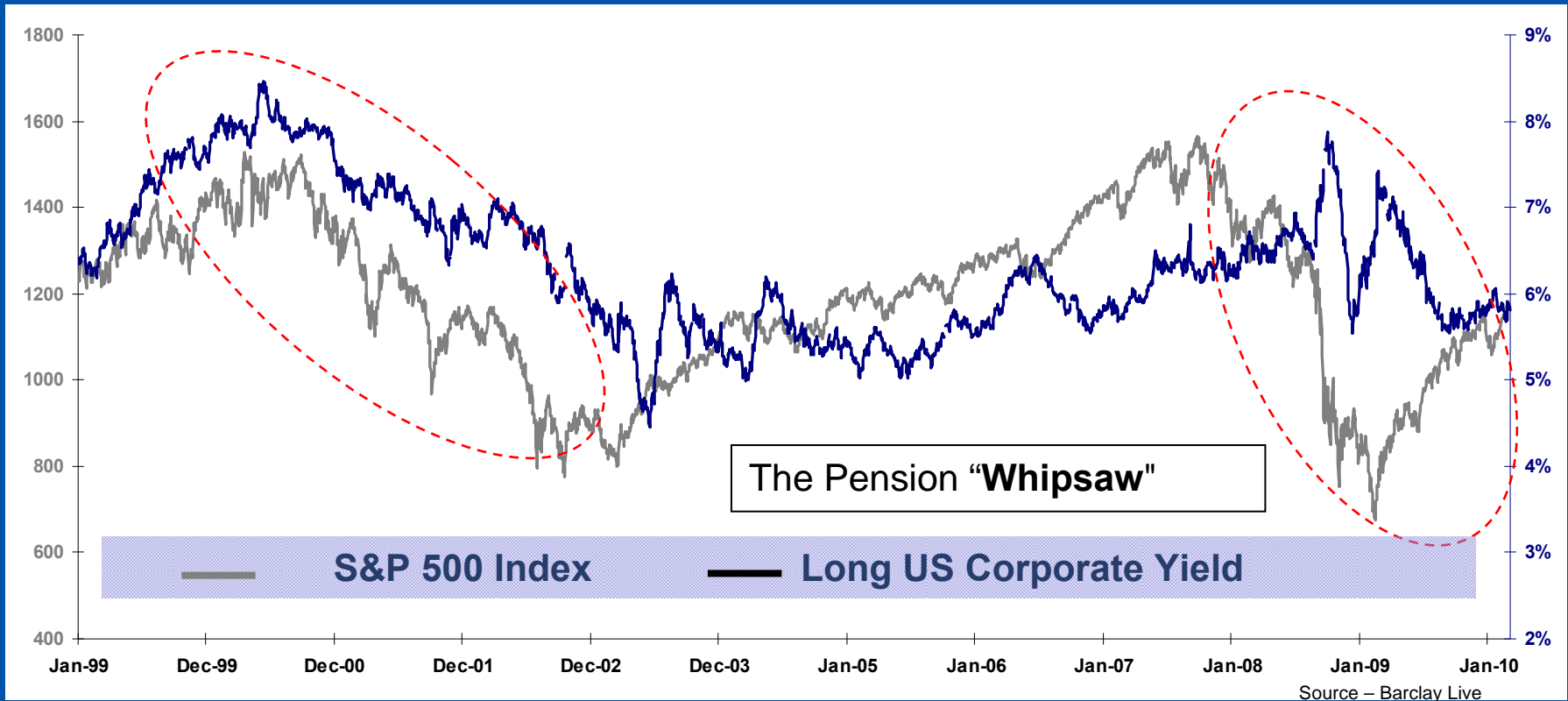
Cumulative return after inflation from 2000 to 2002 bear market

80% stock / 20% bond	-34.35%
70% stock / 30% bond	-25.81%
60% stock / 40% bond	-19.99%
50% stock / 50% bond	-13.87%
40% stock / 60% bond	-7.46%
30% stock / 70% bond	-0.74%
20% stock / 80% bond	+6.29%



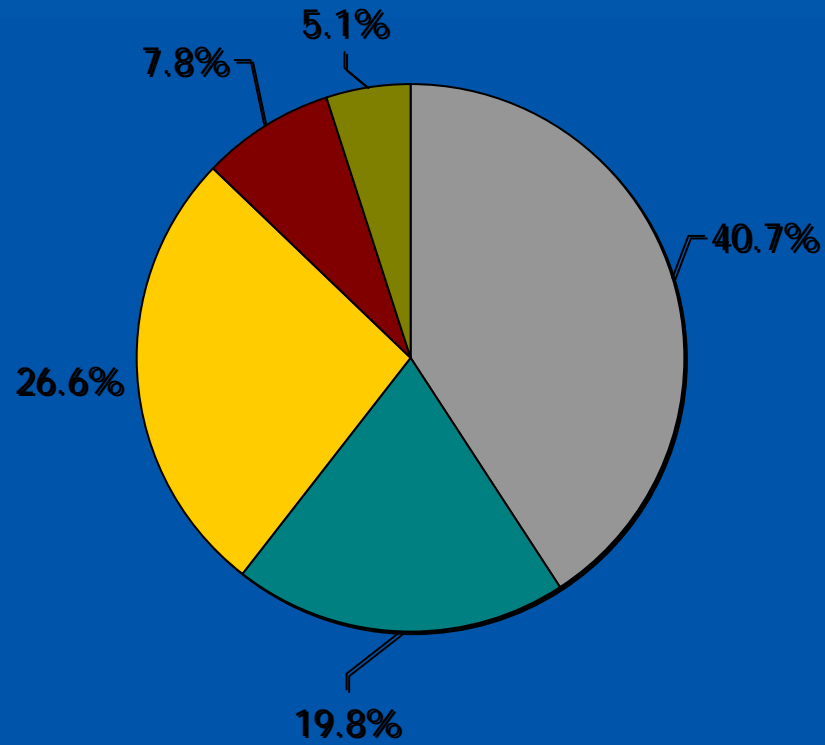
Twice in a Decade-Lost Decade

The Pension "Perfect Storm"





Average Asset Allocation

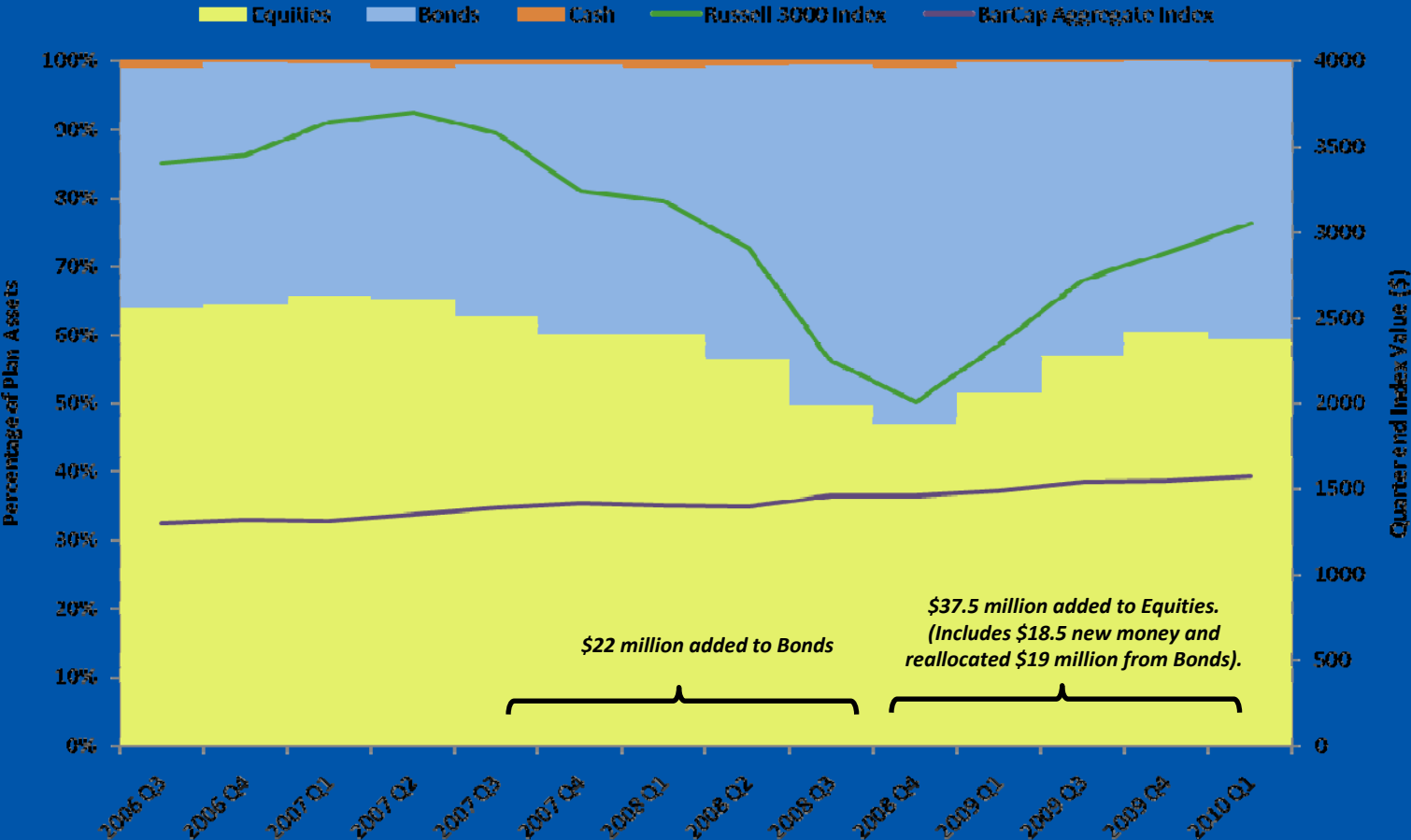


■ US Equity ■ International ■ Fixed Income ■ Alternatives ■ Real Estate



Gwinnett County's Case Study

Asset Allocation vs. Market Performance





Lessons Learned From 2008 and 2009

- Asset Allocation does not eliminate risk.
- Asset Allocation did not prevent double digit losses in 2008.
- A large asset allocation to Bonds helped reduce our risk.
- Do not totally rely on new money to rebalance.
- High or low Equity exposure may require more frequent rebalancing.



US Pension Risk Survey By Hewitt Associates

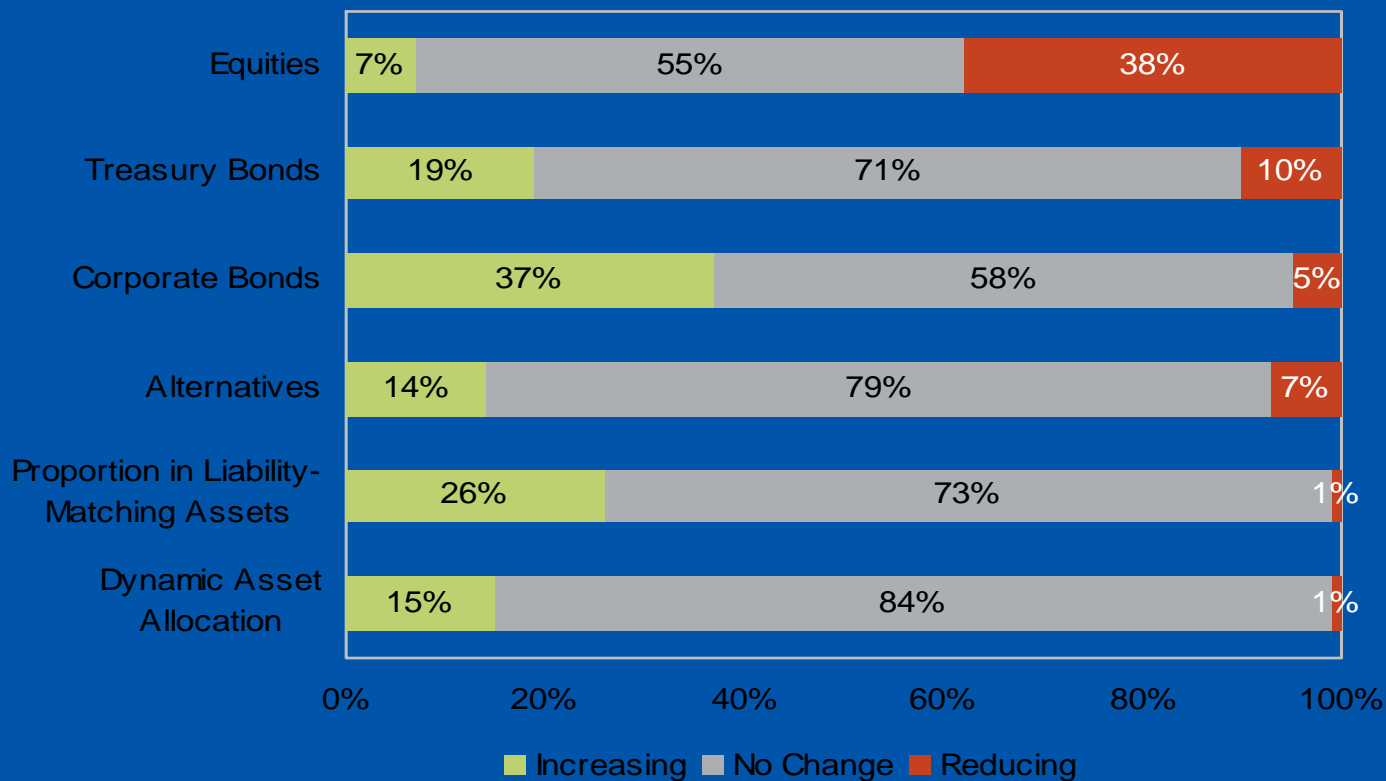
Hewitt survey found most U.S. companies are taking steps to reduce risk.

Taking steps to reduce risk by changing ways they fund, invest and design Plans.

- **Private Companies are motivated by PBGC to fund to 80% funding levels.**
- **% of Companies closing and/or freezing plans in the future has tripled in past year.**
- **Interest is growing in dynamic asset allocation strategies.**



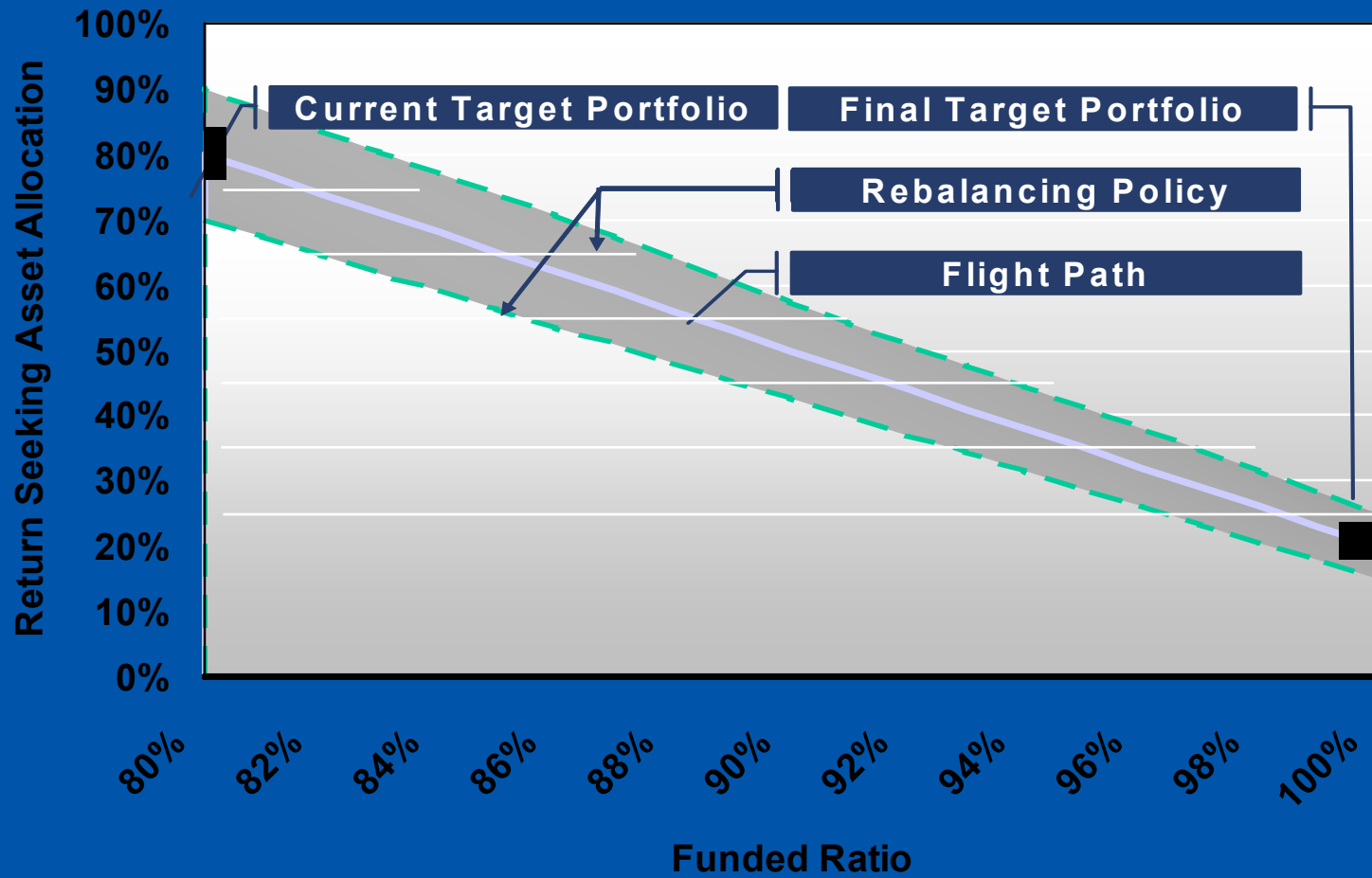
US Pension Risk Survey By Hewitt Associates





gwinnettcounty

Dynamic Asset Allocation





Three Steps to having Ultra Low Volatility Contributions

1. Fully fund the plan.
2. De-risk the investments.
3. Contribute the normal cost every year.



Other Asset Strategies on Ways to Manage Pension Risk

- **Managing Equity Hedging Activities**
 - 1). Managing risk
 - 2). Buying puts, selling calls, costless collar.
 - 3). Timing is important.
- **Issuing Pension Bonds.**
- **Buying fiscal assets income producing (real estate).**



Long Duration Bonds (LDI) Goals

- Increase Correlation Between Assets and Liabilities.
- Reduce Volatility.
- If 30% of Assets/Liabilities were matched then 30% of your risk would be eliminated.
- Perfect risk reduction occurs when the Investment returns match the growth in Liabilities.



Why LDI Over Barclays Aggregate

- Achieve Portfolio Duration Closer to Plans Liabilities.
- Long Bonds Have Higher Yields
- Annual Returns Differential 4.2% (Aggregate and Vs. Gov/Credit).



LDI Strategies– Common Interest Rate Hedging Instruments

Instruments	Type	Pros	Cons
Treasuries/Strips	Physical Bonds	Flight to quality (Negatively correlated) Liquid and long duration	Low yields and expected returns
Investment Grade Corporate Bonds	Physical Bonds	Provides spread to Treasuries	Default downgrade risk Lack of diversification, liquidity and duration correlated with Equities
(CMBS, MBS, High Yield)	Physical Bonds	Potentially attractive risk-adjusted returns	Not useful as a hedge instrument Unclear duration and credit risk
International (Sovereign & Corporate)	Physical Bonds	Diversification Potentially Attractive returns Large Supply	Currency risk Not widely used
IR Swaps, Futures, Credit Swaps	Synthetics	Ability to tailor exposure Highly liquid and customizable duration	Unpredictable results Higher disclosure and reporting requirements



Conclusions

- **Asset allocation drives return.**
- **Volatility in financial markets creates investment risks and opportunities.**
- **De-risk plans by reducing risk assets.**
- **Use LDI when appropriate.**