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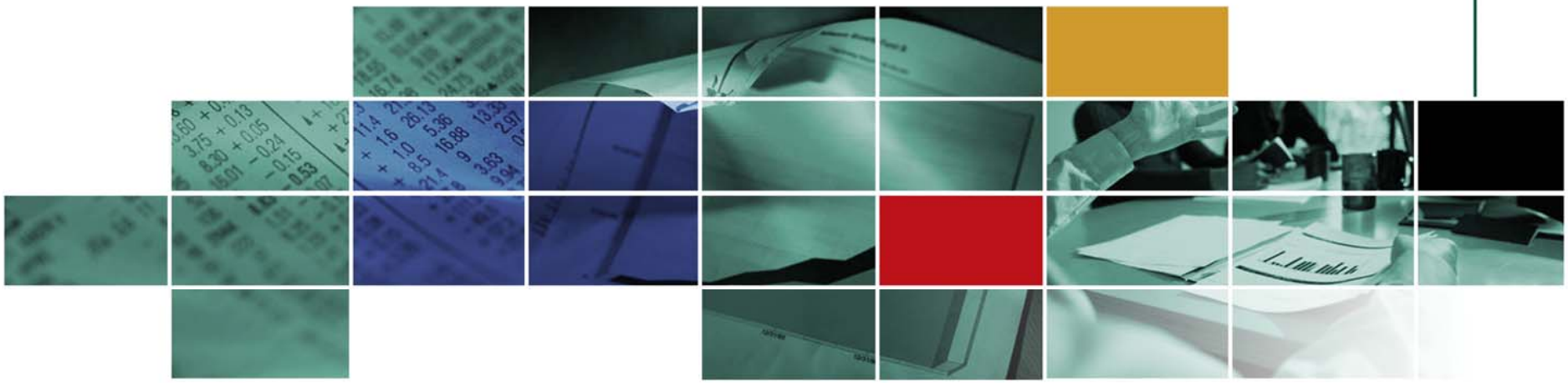
What Every Client Should Know About Capital Markets Assumptions in General, and RVK's in Particular

March 2010



Capital Markets Assumptions

What Are Capital Market Assumptions?

- **Capital market (CM) assumptions are forward-looking estimates of the behavior of asset classes (i.e., groups of closely related investment opportunities).**
- **Examples of CM assumptions include U.S. stocks, emerging market stocks, real estate, U.S. bonds, etc.**

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CM "Behaviors" and Forward Look

- **The "behaviors" we estimate are:**

  1. **Return,**
  2. **Risk (volatility), and**
  3. **Correlation (the relationship of asset class returns and all other asset classes)**

- **The "forward look" is long-term—10 years or more.**

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Capital Markets Assumptions

- **CM assumptions (in the form of a "set" of risk, return, and correlation parameters for every asset class) are the most pervasively used tools in the management of institutional portfolios and, by the way, the construction of many defined contribution plan structures.**

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Capital Markets Assumptions

- **The asset class behaviors that we attempt to estimate in our CM assumptions—risk, return, and correlation—are widely accepted as the most powerful drivers of the total fund return over the long run.**
- **Hence, the mix of asset classes (and the risk, return, and correlation they bring with them) are the most powerful drivers of total fund return over the long run.**

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- **CM assumptions are almost always wrong— for any short or intermediate time period! What really matters is how "right" they are over the long run. (We will discuss what "right" means in a moment!)**

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Capital Markets Assumptions

A Capital Markets Forecast and an Economic Forecast are not the Same Thing!

CM and Economic Forecast Differences

- **Forecast Horizon: Economic forecasts typically center around 12 months. CM forecasts are virtually never less than three years, and even forecasts of five years are rare.**
  - **Typically, the outlook is far longer—10 years or more.**

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Capital Markets Assumptions

A Capital Markets Forecast and an Economic Forecast are not the Same Thing!

Differences (Continued)

- **Decisions Targeted: Economic forecasts are short-term and often target business tactics—shrink inventories, expand production, hire staff, lock in parts supplies, change price points, etc.**
- **CM forecasts target investment decisions, particularly total fund structure.**

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Capital Markets Assumptions

A Capital Markets Forecast and an Economic Forecast are not the Same Thing!

Differences (Continued)

- **Metrics: CM forecasts focus only on factors that directly influence the values of investments— some of which, by the way, like market neutral hedge funds and currency alpha programs are substantially independent of the direction of the economy because the investment is in skill, not the underlying economy, per se.**

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Capital Markets Assumptions

A Capital Markets Forecast and an Economic Forecast are not the Same Thing!

Differences (Continued)

- **Lags in Timing and Speed of Response:**

  The CMs are a giant mirror reflecting the likelihood of value creating or reducing activities and factors in the future. By the time economists have changed their forecasts up or down for the next year's GDP, much (if not all) may already be embedded in today's asset class valuations.

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A Capital Markets Forecast and an Economic Forecast are not the Same Thing!

Aiding & Abetting the Tactical Temptation

- **Trying to manage a large institutional portfolio to take advantage of one-year-ahead economic and CM forecasts—called Tactical Asset Allocation (TAA)—is a dicey and expensive proposition that very few have done well. The market moves like lightning, often much faster than assets can be shifted from one asset class to another. A mistake can prove very costly.**

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Capital Markets Assumptions

CM Assumptions are so Important Things at RVK we:

- **Review and revise them as needed every single year**
- **Deploy a team of RVK professionals each year to focus on each asset class.**
- **Poll our consultants annually as to where they believe CM assumptions need review.**
- **Utilize historical data, current market data, financial theory, economic forecasts, product performance, and other factors to create our risk/return/correlation forecasts.**
- **Ensure that all of our consultants formally review, critique, and ultimately support our CM assumptions.**

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Capital Markets Assumptions

CM Assumptions are so Important That at RVK We:

- **Create a white paper and a PowerPoint presentation annually to support our CM assumptions and document their development.**
- **Test every revised assumptions set on real client portfolios before we put them into use, looking for anomalies, major changes in the fund's asset allocation, or signs of reduced diversification—all potential warning signs of faulty assumptions.**
- **The frequent review, comprehensive analysis, and documented basis for CM assumptions at our firm is unusual in our industry.**

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Capital Markets Assumptions

What Does it Mean to Get CM Assumptions Right?

- **"Relative" accuracy "well distributed" across the assumptions set is far more important than "barbell" accuracy—where some assumptions are "spot on" and others are far off.**
- **"Relative" accuracy "well distributed" across the assumptions set leads to well-diversified portfolios. "Barbell" accuracy produces the opposite—unbalanced, poorly diversified funds.**
- **Achieving "relative," "well-distributed" accuracy across a CM assumptions set, requires that every risk and return assumption needs to be "triangulated" to all other assumptions—particularly closely related ones.**

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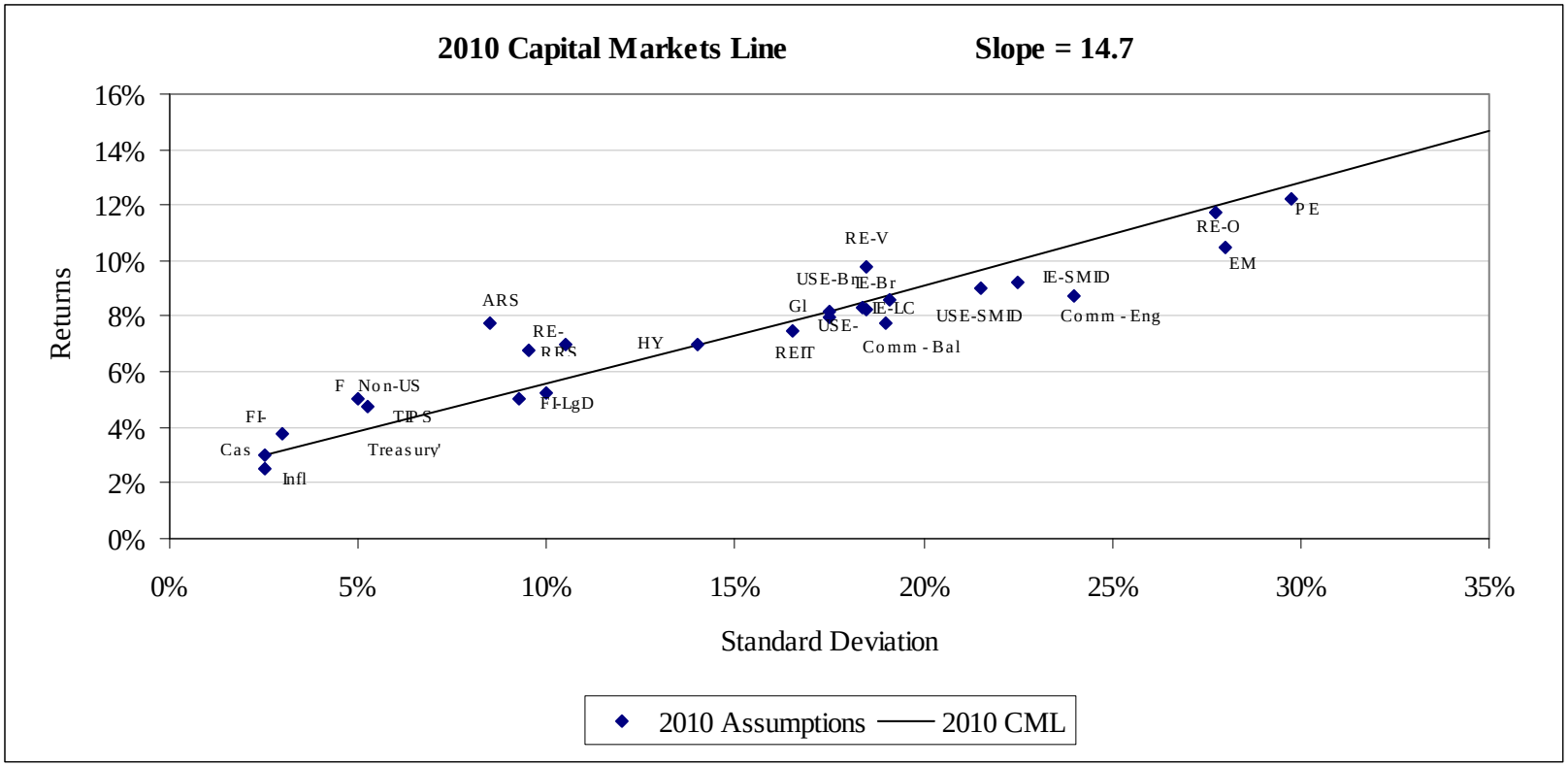
Capital Markets Assumptions



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Capital Markets Assumptions

What Does it Mean to Get CM Assumptions Right?

- **But "absolute" accuracy matters too—just not as much.**
- **Having CM assumptions that are too low across the board can cause an endowment/pension plan to believe it must restrict spending/benefits to a greater degree than necessary.**
- **Having CM assumptions that are across the board too high is an even worse problem because it leads an endowment/ pension plan to believe it can spend more/pay more benefits than they can afford.**

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Capital Markets Assumptions

A Client Should Keep a Few Other Things in Mind When Evaluating CM Assumptions

- **Consultants are competitive and want to win business. Using excessively high CM assumptions across the board is one way to win business by suggesting clients will earn high returns.**
- **Remember, these are forecasts only, and their chief purpose is to optimally structure the portfolio. Well-structured funds are produced by "well-distributed accuracy" not simply "forecasting" higher returns. And well-structured funds end up with higher long-term returns and lower risk**
- **A well-structured and well-executed fund will produce the highest returns the markets will allow—regardless of what we consultants forecast for total return.**

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Capital Markets Assumptions

A Client Should Keep a Few Other Things in Mind When Evaluating CM Assumptions

- **Fee structures that reward your consultant for assets deployed in some asset classes more than others will incentivize them to bias their CM assumptions to maximize the amount of the fund that produces the most fee revenue for them.**
- **Again, CM assumptions are "set" with each risk-and-return estimate for an asset class bearing a rational relationship to others in the set.**
- **RVK is ready and willing to do sensitivity analysis for any client by varying the assumptions for specific asset classes or replacing the entire set with one a client wishes to test. But for an asset allocation, asset-liability study, structure study, spending policy analysis (all of which use CM assumptions) to carry our recommendation, it needs to be based on our integrated assumptions set.**

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Appendices

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Capital Markets Assumptions

2010 Assumptions

Asset Class	2009 Return (Arithmetic)	2009 Risk (Standard Deviation)	2009 Return (Compound)	2010 Return (Arithmetic)	2010 Risk (Standard Deviation)	2010 Return (Compound)	Variance (2010 - 2009) Return (Arithmetic)	Variance (2010 - 2009) Risk (Standard Deviation)	Variance (2010 - 2009) Return (Compound)
Global Equity	8.65%	16.40%	7.43%	8.32%	18.36%	6.80%	-0.33%	1.96%	-0.64%
Large/Mid Cap US Equity	8.25%	17.00%	6.94%	8.00%	17.50%	6.61%	-0.25%	0.50%	-0.33%
Small/Mid Cap US Equity	9.25%	21.00%	7.29%	9.00%	21.50%	6.94%	-0.25%	0.50%	-0.35%
Broad US Equity	8.45%	17.25%	7.10%	8.15%	17.50%	6.76%	-0.30%	0.25%	-0.34%
Dev'd Large/Mid Cap Int'l	8.50%	18.00%	7.04%	8.25%	18.50%	6.70%	-0.25%	0.50%	-0.33%
Dev'd Int'l Small/Mid Cap	9.50%	22.00%	7.35%	9.25%	22.50%	7.00%	-0.25%	0.50%	-0.35%
Broad International Equity	8.85%	18.10%	7.38%	8.60%	19.10%	6.96%	-0.25%	1.00%	-0.42%
Emerging Markets Equity	10.50%	26.00%	7.56%	10.50%	28.00%	7.11%	0.00%	2.00%	-0.45%
Core Fixed Income	5.25%	4.50%	5.15%	5.00%	5.00%	4.88%	-0.25%	0.50%	-0.27%
Non-US Fixed Income UH	5.50%	8.75%	5.14%	5.00%	9.25%	4.59%	-0.50%	0.50%	-0.54%
TIPS	5.00%	4.75%	4.89%	4.75%	5.25%	4.62%	-0.25%	0.50%	-0.27%
Low Duration Fixed Income	4.00%	2.50%	3.97%	3.75%	3.00%	3.71%	-0.25%	0.50%	-0.26%
Long Duration Fixed	5.50%	8.50%	5.16%	5.25%	10.00%	4.78%	-0.25%	1.50%	-0.38%
High Yield	7.25%	11.50%	6.64%	7.00%	14.00%	6.10%	-0.25%	2.50%	-0.54%
Real Estate - Core –	7.00%	9.25%	6.60%	7.00%	10.50%	6.49%	0.00%	1.25%	-0.11%
Real Estate - Value Added	10.00%	18.50%	8.48%	9.75%	18.50%	8.22%	-0.25%	0.00%	-0.25%
Real Estate - Opportunistic	12.00%	27.75%	8.71%	11.75%	27.75%	8.46%	-0.25%	0.00%	-0.26%
REITS	7.75%	16.50%	6.51%	7.50%	16.50%	6.26%	-0.25%	0.00%	-0.25%
Absolute Return	8.00%	7.75%	7.72%	7.75%	8.50%	7.42%	-0.25%	0.75%	-0.31%
Real Return Strategy	7.00%	9.25%	6.60%	6.75%	9.50%	6.33%	-0.25%	0.25%	-0.27%
Commodities - Broad	7.75%	19.00%	6.11%	7.75%	19.00%	6.11%	0.00%	0.00%	0.00%
Commodities - Energy	9.25%	24.00%	6.71%	8.75%	24.00%	6.19%	-0.50%	0.00%	-0.51%
Private Equity	12.50%	29.75%	8.76%	12.25%	29.75%	8.50%	-0.25%	0.00%	-0.26%
Cash Equivalents	3.25%	2.00%	3.23%	3.00%	2.50%	2.97%	-0.25%	0.50%	-0.26%
Inflation	2.50%	2.00%	2.48%	2.50%	2.50%	2.47%	0.00%	0.50%	-0.01%

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Capital Markets Assumptions

2010 Correlation Matrix

	Global Equity	Large/Mid Cap US Equity	Small/Mid Cap US Equity	Broad US Equity	Developed Large/Mid Cap Int'l	Developed Small/Mid Cap Int'l	Emerging Markets	Broad International	Core Fixed Income	Non-US Fixed Income (Unhedged)	TIPS	Low Duration Fixed Income	Long Duration Fixed Income	High Yield	Real Estate - Core - Property	Real Estate - Value-Added	Real Estate - Opportunistic	REITS	Absolute Return	Real Return Strategy	Commodities - Broad	Commodities - Energy	Private Equity	Inflation	Cash Equivalents
Global Equity	1.00	0.93	0.89	0.94	0.96	0.90	0.86	0.97	0.06	0.18	0.11	-0.26	0.11	0.67	0.10	0.35	0.59	0.79	0.68	0.69	0.39	0.31	0.63	0.05	-0.05
Large/Mid Cap US Equity	0.93	1.00	0.88	0.99	0.63	0.72	0.67	0.74	0.25	0.03	0.07	0.07	0.29	0.58	0.11	0.37	0.64	0.67	0.47	0.58	0.25	0.08	0.65	0.01	0.05
Small/Mid Cap US Equity	0.89	0.88	1.00	0.92	0.63	0.77	0.70	0.70	0.18	-0.02	0.07	0.01	0.20	0.63	0.08	0.32	0.57	0.69	0.51	0.64	0.29	0.18	0.67	-0.02	0.01
Broad US Equity	0.94	0.99	0.92	1.00	0.66	0.74	0.69	0.74	0.24	0.02	0.07	0.06	0.25	0.60	0.11	0.37	0.63	0.68	0.49	0.60	0.26	0.16	0.67	-0.02	0.04
Developed Large/Mid Cap Int'l	0.96	0.63	0.63	0.66	1.00	0.94	0.69	0.99	0.18	0.41	0.12	0.04	0.21	0.50	0.10	0.30	0.51	0.79	0.49	0.70	0.39	0.15	0.49	-0.07	0.01
Developed Small/Mid Cap Int'l	0.90	0.72	0.77	0.74	0.94	1.00	0.80	0.94	0.07	0.29	0.19	-0.29	0.13	0.65	0.24	0.33	0.59	0.76	0.66	0.73	0.45	0.36	0.50	0.07	-0.14
Emerging Markets	0.86	0.67	0.70	0.69	0.69	0.80	1.00	0.75	0.04	0.08	0.13	-0.17	0.07	0.56	-0.02	0.21	0.43	0.69	0.52	0.69	0.39	0.24	0.52	0.03	-0.06
Broad International	0.97	0.74	0.70	0.74	0.99	0.94	0.75	1.00	0.14	0.36	0.14	-0.11	0.16	0.55	0.10	0.33	0.55	0.80	0.46	0.72	0.42	0.24	0.60	0.00	-0.07
Core Fixed Income	0.06	0.25	0.18	0.24	0.18	0.07	0.04	0.14	1.00	0.44	0.74	0.86	0.95	0.30	-0.13	-0.20	-0.27	0.23	0.15	0.29	0.07	-0.01	-0.11	-0.16	0.26
Non-US Fixed Income (Unhedged)	0.18	0.03	-0.02	0.02	0.41	0.29	0.08	0.36	0.44	1.00	0.52	0.41	0.41	0.05	-0.10	-0.19	-0.29	0.32	0.06	0.40	0.20	0.11	-0.19	-0.07	0.09
TIPS	0.11	0.07	0.07	0.07	0.12	0.19	0.13	0.14	0.74	0.52	1.00	0.45	0.70	0.28	-0.02	-0.04	-0.21	0.26	0.19	0.51	0.35	0.29	-0.12	0.10	0.01
Low Duration Fixed Income	-0.26	0.07	0.01	0.06	0.04	-0.29	-0.17	-0.11	0.86	0.41	0.45	1.00	0.72	0.00	0.02	-0.15	-0.32	-0.06	0.03	-0.08	-0.08	-0.05	-0.17	-0.05	0.50
Long Duration Fixed Income	0.11	0.29	0.20	0.25	0.21	0.13	0.07	0.16	0.95	0.41	0.70	0.72	1.00	0.30	-0.14	-0.21	-0.27	0.24	0.16	0.31	0.08	-0.05	-0.14	-0.22	0.16
High Yield	0.67	0.58	0.63	0.60	0.50	0.65	0.56	0.55	0.30	0.05	0.28	0.00	0.30	1.00	-0.17	0.05	0.27	0.60	0.38	0.62	0.29	0.11	0.40	0.04	-0.06
Real Estate - Core - Property	0.10	0.11	0.08	0.11	0.10	0.24	-0.02	0.10	-0.13	-0.10	-0.02	0.02	-0.14	-0.17	1.00	0.75	0.51	0.14	0.17	0.26	0.24	0.20	0.24	0.35	0.48
Real Estate - Value-Added	0.35	0.37	0.32	0.37	0.30	0.33	0.21	0.33	-0.20	-0.19	-0.04	-0.15	-0.21	0.05	0.75	1.00	0.75	0.32	0.26	0.21	0.16	0.08	0.49	0.26	0.32
Real Estate - Opportunistic	0.59	0.64	0.57	0.63	0.51	0.59	0.43	0.55	-0.27	-0.29	-0.21	-0.32	-0.27	0.27	0.51	0.75	1.00	0.50	0.36	0.22	0.13	0.05	0.69	0.03	0.16
REITS	0.79	0.67	0.69	0.68	0.79	0.76	0.69	0.80	0.23	0.32	0.26	-0.06	0.24	0.60	0.14	0.32	0.50	1.00	0.45	0.84	0.35	0.18	0.47	0.02	-0.08
Absolute Return	0.68	0.47	0.51	0.49	0.49	0.66	0.52	0.46	0.15	0.06	0.19	0.03	0.16	0.38	0.17	0.26	0.36	0.45	1.00	0.61	0.47	0.34	0.48	0.14	0.18
Real Return Strategy	0.69	0.58	0.64	0.60	0.70	0.73	0.69	0.72	0.29	0.40	0.51	-0.08	0.31	0.62	0.26	0.21	0.22	0.84	0.61	1.00	0.79	0.68	0.42	0.22	-0.06
Commodities - Broad	0.39	0.25	0.29	0.26	0.39	0.45	0.39	0.42	0.07	0.20	0.35	-0.08	0.08	0.29	0.24	0.16	0.13	0.35	0.47	0.79	1.00	0.90	0.28	0.26	-0.01
Commodities - Energy	0.31	0.08	0.18	0.16	0.15	0.36	0.24	0.24	-0.01	0.11	0.29	-0.05	-0.05	0.11	0.20	0.08	0.05	0.18	0.34	0.68	0.90	1.00	0.05	0.20	0.00
Private Equity	0.63	0.65	0.67	0.67	0.49	0.50	0.52	0.60	-0.11	-0.19	-0.12	-0.17	-0.14	0.40	0.24	0.49	0.69	0.47	0.48	0.42	0.28	0.05	1.00	0.07	0.13
Inflation	0.05	0.01	-0.02	-0.02	-0.07	0.07	0.03	0.00	-0.16	-0.07	0.10	-0.05	-0.22	0.04	0.35	0.26	0.03	0.02	0.14	0.22	0.26	0.20	0.07	1.00	0.36
Cash Equivalents	-0.05	0.05	0.01	0.04	0.01	-0.14	-0.06	-0.07	0.26	0.09	0.01	0.50	0.16	-0.06	0.48	0.32	0.16	-0.08	0.18	-0.06	-0.01	0.00	0.13	0.36	1.00

Correlation Greater than 0.5
Correlation Between 0 and 0.5
Correlation Less than 0

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ASSET ALLOCATION ASSUMPTIONS
December 31, 2010

R.V. Kuhns & Associates, Inc.
Asset Allocation – Return & Risk Assumptions

The asset allocation process is highly dependent upon the asset class assumptions, which are used to model optimized portfolios. R.V. Kuhns & Associates, Inc. ("RVK") creates long-term expected asset class return and risk assumptions through a multi-step process that combines historical return experience and forward-looking expected returns, which consider a variety of historical and potential relationships and factors. We combine the results of this analysis with a survey of prevailing investment industry opinions to stress test our expectations.

This report serves as an explanatory document that provides background on our asset allocation assumption-setting process, as well as a detailed analysis of our expectations for each asset class. Correlations are generally derived from historical data and are slightly modified in some cases to improve accuracy.

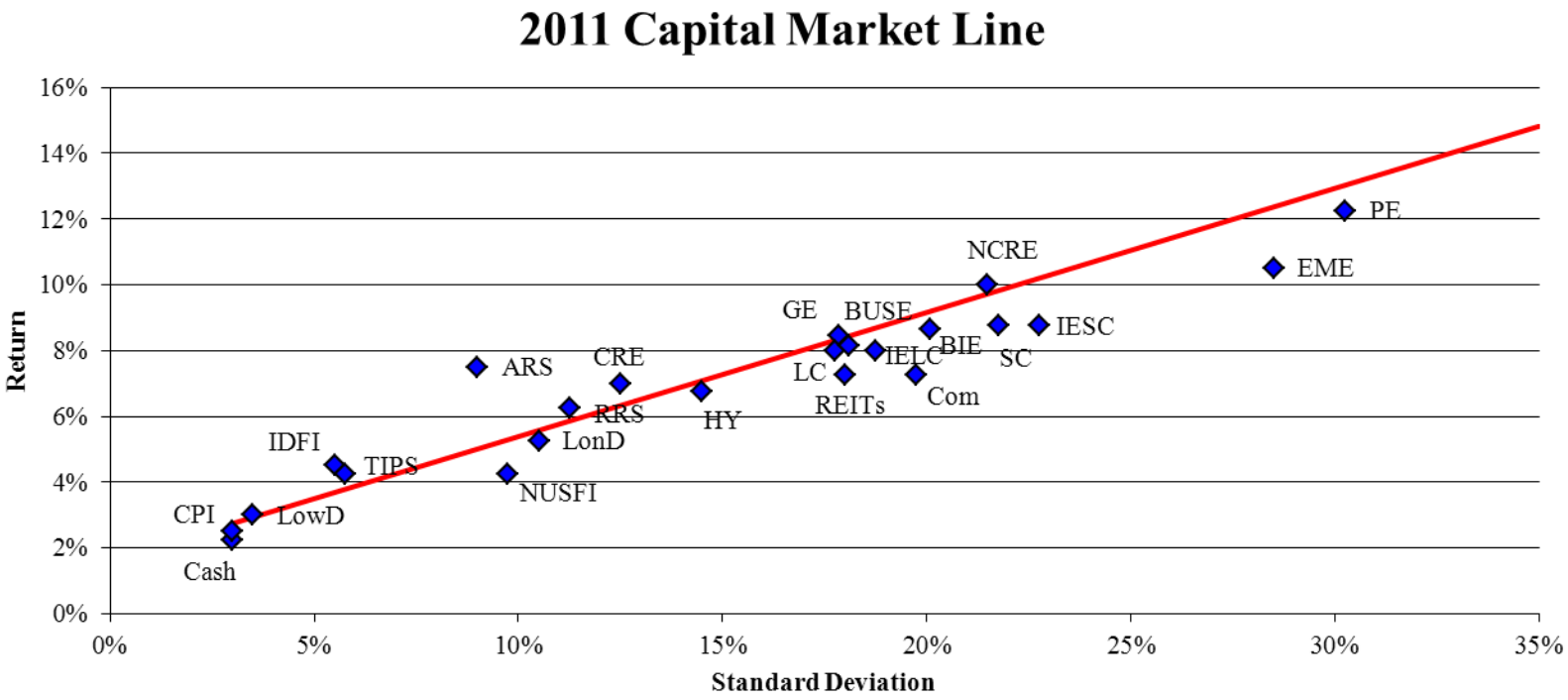
SUMMARY OF ASSUMPTIONS

Our forward-looking return and risk assumptions as of December 31, 2010 for the major asset classes are listed below:

Figure 1: Asset Class Return and Risk Assumptions for Calendar Year 2011

Asset Class	Arithmetic Return %	Risk (Standard Deviation) %
Global Equity	8.45	17.85
US Equity		
Large/Mid Cap US Equity	8.00	17.75
Small/Mid Cap US Equity	8.75	21.75
Broad US Equity	8.15	18.10
International Equity (Non-US)		
Developed Large/Mid Cap Int'l	8.00	18.75
Developed Small/Mid Cap Int'l	8.75	22.75
Emerging Markets	10.50	28.50
Broad International	8.65	20.10
Fixed Income		
Int. Duration Fixed Income	4.50	5.50
Non-US Fixed Income (Unhedged)	4.25	9.75
TIPS	4.25	5.75
Low Duration Fixed Income	3.00	3.50
Long Duration Fixed Income	5.25	10.50
High Yield	6.75	14.50
Real Estate		
Core Real Estate	7.00	12.50
Non-Core Real Estate	10.00	21.50
REITS	7.25	18.00
Alternative Strategies		
Absolute Return	7.50	9.00
Real Return Strategy	6.25	11.25
Commodities	7.25	19.75
Private Equity	12.25	30.25
Cash and Inflation		
Inflation	2.50	3.00
Cash Equivalents	2.25	3.00

Figure 2: Capital Market Line



CORRELATION

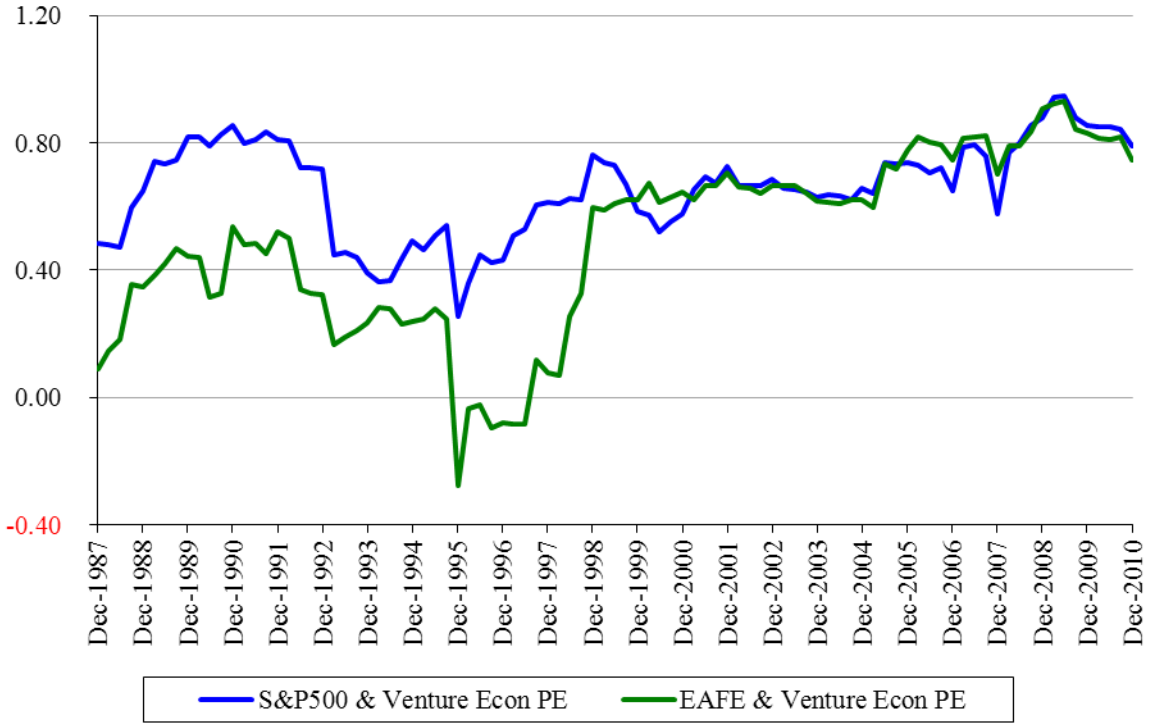
The overall process for creating correlation assumptions is consistent with practices applied in previous years. In general, long-term historical index values and interrelationships constitute the foundation, while more recent trends function as a forecasting tool. Specifically, a 90% weight is placed on "since inception" data and a 10% weight is applied to the last five-year period. This methodology yields a complex but manageable matrix of assumptions that takes into account both quantitative and qualitative factors.

This year we modified the standard 90/10 methodology for the three least liquid asset classes – Private Equity, Real Estate and Timber – attempting to account/correct for the lags between periodic accounting reporting and underlying true economic values, as well as to more accurately incorporate trends observed over the last decade that are reasonably likely to reoccur.

For Private Equity we employed a 50/50 weighting to periodic correlations observed since inception and during the last ten-year period. We believe that this methodology more accurately reflects the nature of the private equity markets over the last 10 years (specifically its maturation as an asset class), while also incorporating its long-term history. As shown in **Figure 3**, the correlations between private and public equities have increased over the last 10-15 years. Some of the following factors may be driving this trend:

- **Public Market Exits** – Private Equity firms frequently exit investments and generate value for investors via merger & acquisitions ("M&A") and initial public offerings ("IPOs"). Both the success and frequency of these transactions is closely correlated with conditions in public equity markets.
- **Increasing Supply of Capital** – As the private equity marketplace has matured, significantly more players have entered the private equity space resulting in more firms fighting for less unique opportunities.
- **Diminished Role of Venture Capital** – The increasing average size of buyouts on a weighted basis and relatively smaller venture capital deal volume illustrate a diminished role of venture capital in the private equity universe. This represents a departure from the past in which venture capital constituted a larger percentage of overall deal volume.
- **Increasing Valuation Frequency Due to New Accounting Requirements** – Fair value accounting and compliance with revised auditing standards encourages a more frequent revaluation of portfolio companies (away from a generally cost- or exit-based approach). A more frequent valuation approach (especially one that emphasizes public market comparables) is likely to increase observed correlations.

Figure 3: 5 Year Rolling Correlations



For Real Estate (both Core and Non-Core) we kept the 90/10 methodology but applied a two-quarter lag to the return streams. We believe that a lagged methodology better reflects the long-term relationships and economic realities of the private real estate asset class given current appraisal smoothing/lag and partial portfolio revaluations. However, we note that recently appraisers have been more proactive in marking assets to market and fund managers have adopted new policies to appraise underlying assets more frequently and with greater rigor. Consequently, we will be revisiting this methodology annually and may adjust the lag to one quarter should there be additional advances in reporting.

A copy of the RVK 2010 correlation matrix is provided in Appendix A.

INFLATION AND CASH

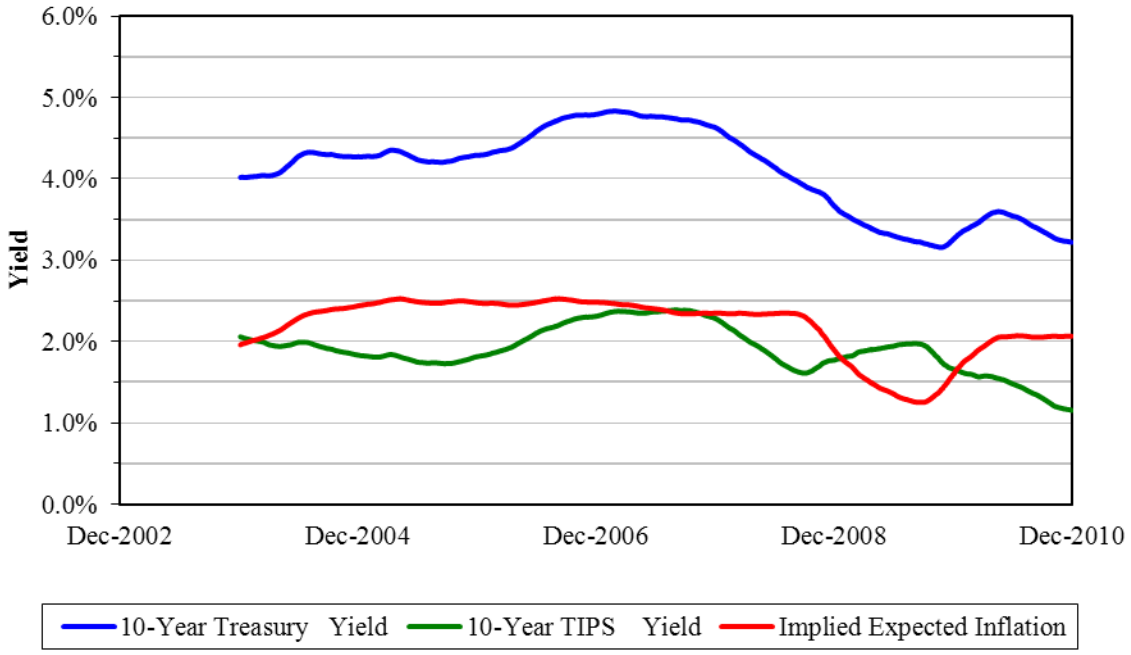
Summary

Figure 4: Inflation and Cash Equivalents Assumptions									
Asset Class	2010			2011			One Year Adjustment		
	Nominal Return (Arithmetic) %	Risk (Standard Deviation) %	Nominal Return (Compound) %	Nominal Return (Arithmetic) %	Risk (Standard Deviation) %	Nominal Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %
Inflation	2.50	2.50	2.47	2.50	3.00	2.46	0.00	+ 0.50	-0.01
Cash Equivalents	3.00	2.50	2.97	2.25	3.00	2.21	-0.75	+ 0.50	-0.76

Inflation

A commonly referenced[1] measure of expected Consumer Price Index ("CPI") inflation is the "break-even inflation rate." This rate approximates expected inflation compensation using the difference between the yield-to-maturity of nominal and inflation-linked Treasury securities of equivalent maturities. For 10-year Treasury securities as of December 31, 2010 the average-to-date differential was 2.16%, the rolling one-year average was 2.06%, and the rolling one-month average was 2.25%.

Figure 5: Market Expectations for Inflation
Rolling 252 Business Day Average



As of 12/31/2010: **3.22%** **1.15%** **2.06%**

Implied Expected Inflation is the difference between the nominal 10-Year Treasury Yield and the 10-Year TIPS Yield.

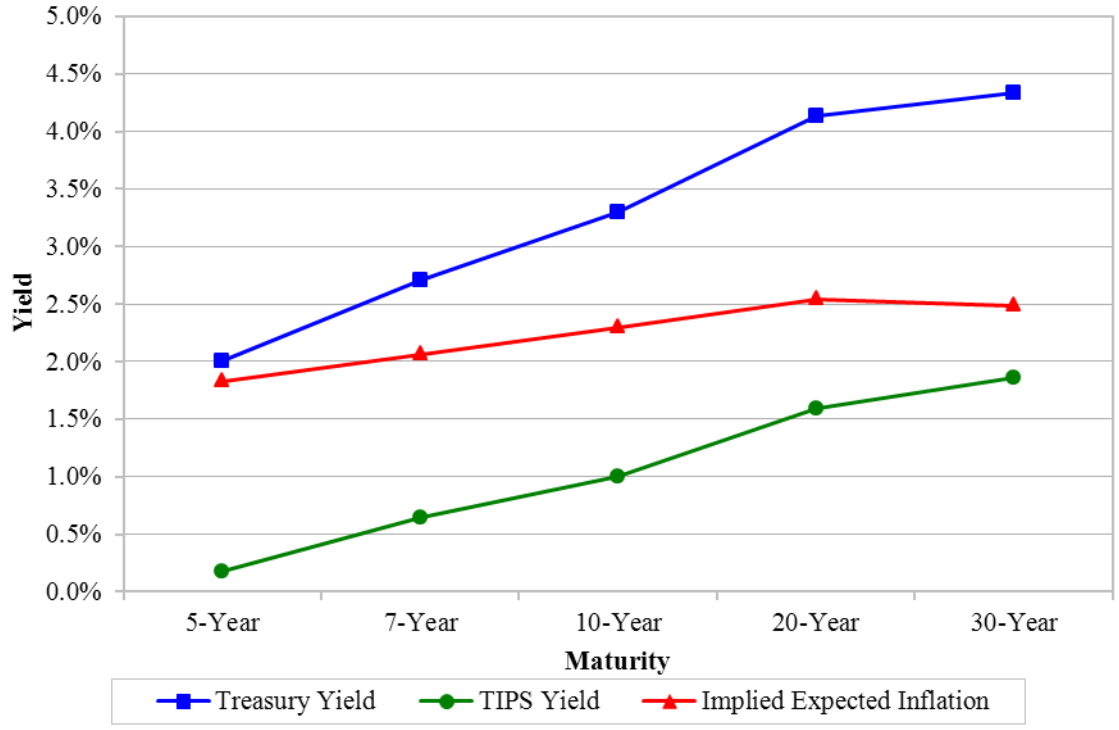
Calculation is based on business day periodicity. There are 1,752 observations shown on this chart.

[1] "Although clues about inflation expectations abound in financial markets, inflation-indexed securities would appear to be the most direct source of information about inflation expectations and real interest rates." Remarks by Governor Ben S. Bernanke Before The Investment Analysts Society of Chicago, Chicago, Illinois April 15, 2004 http://www.federalreserve.gov/boarddocs/speeches/2004/20040415/default.htm

Source: Federal Reserve. (2011)

Figure 6 shows the results for implied, expected inflation using point in time data as of December 31, 2010 across various maturities. The data mimics a yield curve, and reflects the differences in expectation depending on the length of the time horizon. While long run inflation expectations appear to be higher, the slope is relatively flat.

Figure 6: Market Expectations for Inflation



As of December 31, 2010	5-Year	7-Year	10-Year	20-Year	30-Year
Treasury Yield	2.01%	2.71%	3.30%	4.13%	4.34%
TIPS Yield	0.18%	0.65%	1.00%	1.59%	1.86%
Implied Expected Inflation	1.83%	2.06%	2.30%	2.54%	2.48%

Implied Expected Inflation is the difference between the nominal Treasury Yield and the TIPS Yield.

Source: US Department of the Treasury. (2011)

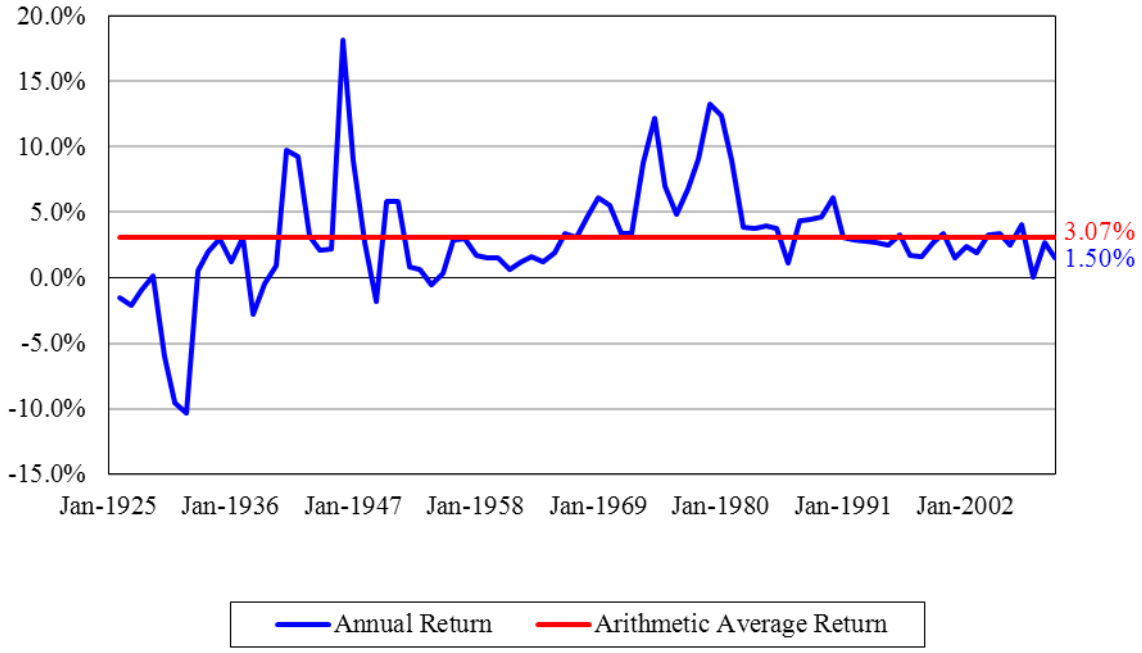
Another useful exercise is conducting a historical review of inflation. Below we review the Ibbotson US Inflation[2] series for a historical measure of the price inflation experienced in the United States.

[2] The Consumer Price Index for All Urban Consumers ("CPI-U"), not seasonally adjusted, is used to measure inflation, which is the rate of change of consumer goods prices. Unfortunately, the inflation rate as derived by the CPI is not measured over the same period as the other asset returns. All security returns are measured from one month-end to the next month-end. CPI commodity prices are collected during the month. Thus, measured inflation rates lag the other series by about one-half month. Prior to January 1978, the CPI (as compared with CPI-U), not seasonally adjusted, was used. For the period 1978 through 1987, the index uses the year 1967 in determining the items comprising the basket of goods. Following 1987, a three-year period, 1982 through 1984, was used to determine the items making up the basket of goods. For additional info, please refer to the DOL web page @ http://stats.bls.gov.

All arithmetic mean returns shown above are calculated by taking the arithmetic average of the *n* one-year compound returns (based on monthly or quarterly data as appropriate for the index) over the stated analysis period. All volatilities shown above are calculated by taking the standard deviation of the *n* one-year compound returns (based on monthly or quarterly data as appropriate for the index) over the stated analysis period.

Understanding inflation is fundamental to providing investors with a gauge of the expected real returns on their investments (i.e., the return after erosion of purchasing power). The measure is based on both historical observations and forward-looking expectations, and it drives many relationships among and within asset classes. **Figure 7** shows historical inflation rates. The figure demonstrates that while recent inflation has been low (near or below the long run average), the US has experienced several periods of high inflation in the past.

Figure 7: Annual US Inflation Return

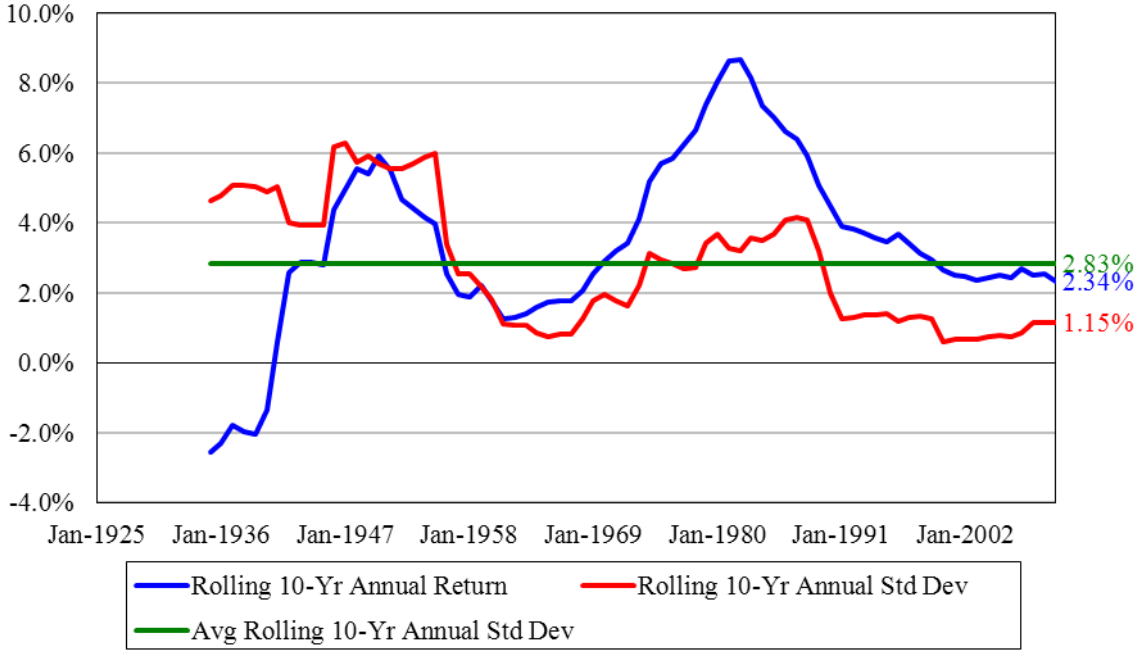


Source: Ibbotson Associates. (2011)

An analysis of rolling period inflation **volatility**, as illustrated in **Figure 8**, reveals that near-term inflation volatility has remained consistently low over the past 30 years. However, given current economic uncertainties, and with the federal funds target rate at historic lows, volatility could increase.

All average annual premium and real return calculations shown above are the arithmetic average of the *n* one-year arithmetic differences between two indices (for return premiums) or an index and the CPI-U (for real returns) over the stated analysis period. Where shown, geometric returns are compounded over the analysis period, and then shown on an annualized basis.

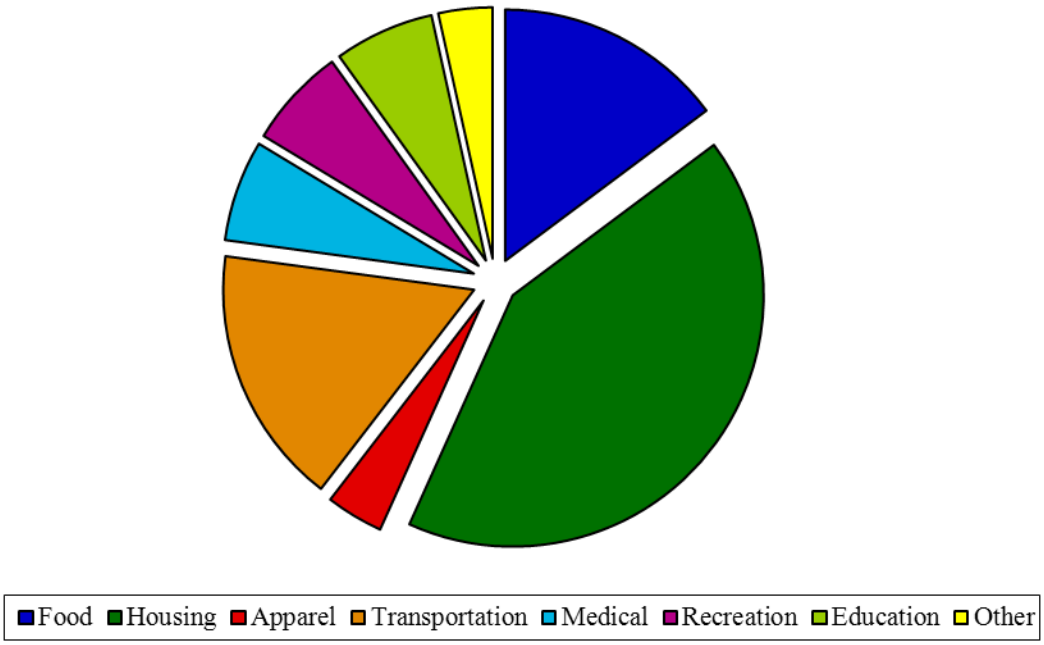
Figure 8: Rolling 10-Year Annual US Inflation and Standard Deviation



Source: Ibbotson Associates. (2011)

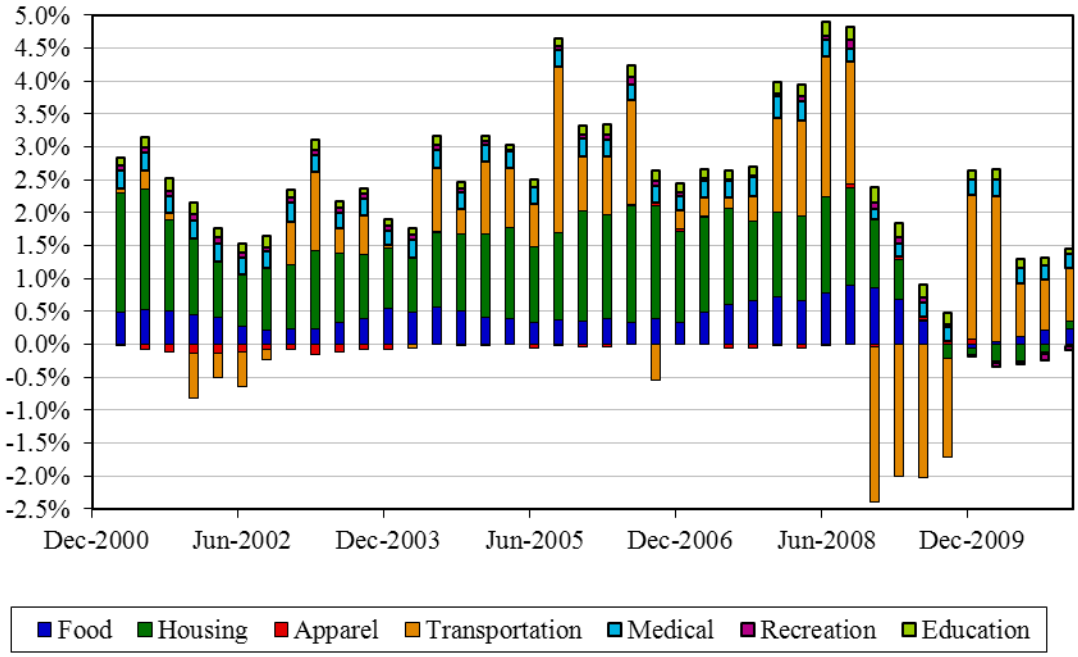
Figures 9 and **10** provide further insight into the components and movements of the CPI inflation index. Housing is the largest component, while Transportation is the most volatile.

Figure 9: CPI Composition
As of December 2009



Source: Bloomberg. (2011)

Figure 10: Contribution to CPI YoY Change (Not Seasonally Adjusted)



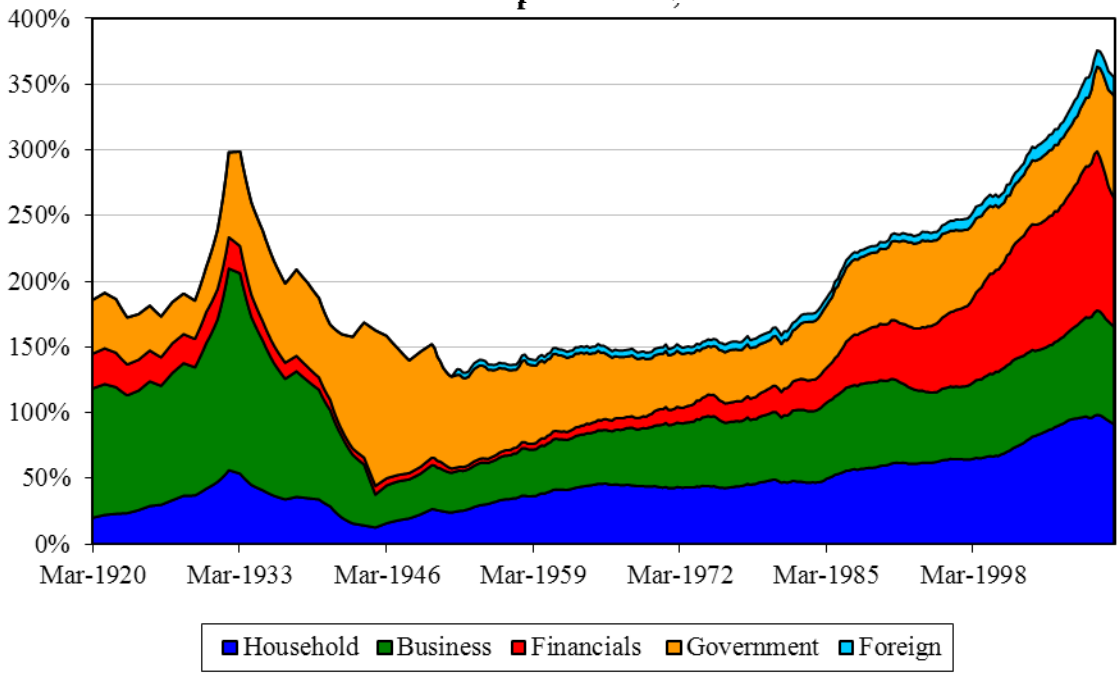
Source: Bloomberg. (2011)

Over the last several years, inflation (CPI) has trended downward as disinflationary pressures have dominated the economic landscape. However, with the United States establishing the groundwork for a potential inflationary environment in the future, inflationary concerns merit further evaluation.

In general, it is difficult to singularly describe the cause of inflation, as a number of underlying variables can influence price levels. Swift increases in aggregate demand (e.g. abnormal fiscal expansion), supply shocks (e.g. oil supply constraints) and monetary expansion (too much money chasing scarce goods) have all influenced inflationary regimes in the past. Therefore, to project the future path of inflation it is critical to examine the current economic backdrop as it will dictate whether deflationary or inflationary pressures ultimately persist. So where does the United States currently stand and what factors are relevant?

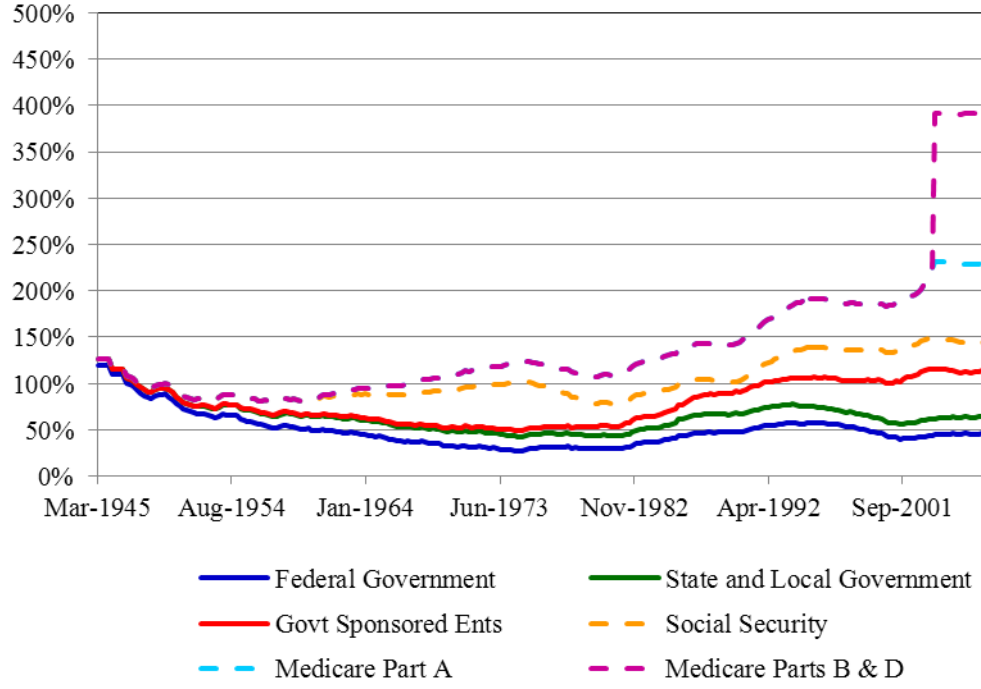
As seen in the following charts, the United States economy has experienced a large build up in debt in both the public and private sector. As the growth in credit outpaces the growth in the broader economy (i.e. the debt/GDP ratio increases) this produces a strong incentive to expand the money supply and reduce the value of debt in real terms. In this environment of expanding credit, however, inflation has remained steadily low and currently bond yields suggest that market participants are not particularly worried about increased inflation.

Figure 11: US Credit Market Debt as % of GDP
As of September 30, 2010



Source: Bloomberg. (2011)

Figure 12: Public Debt as % of GDP

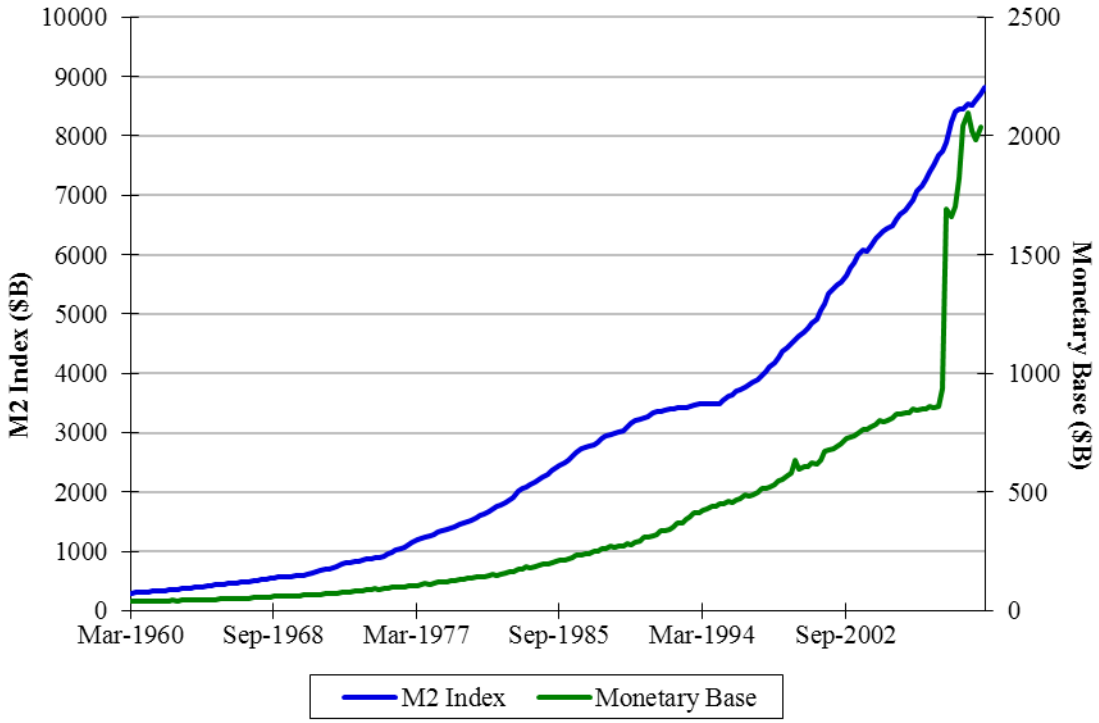


Source: Research Associates, LLC. (2011)

As shown in **Figure 13**, the Federal Reserve has expanded the monetary base (i.e., currency + bank reserves) rapidly in recent years – almost tripling its size practically overnight. This expansion was

driven by an anemic economy, liquidity concerns, and fears of a deflationary spiral. This increase has not led to a commensurate increase in broader measures of the money supply, as these measures have grown mostly along a steady trend averaging about 6% a year.

Figure 13: M2 Money Supply and Monetary Base
As of September 30, 2010

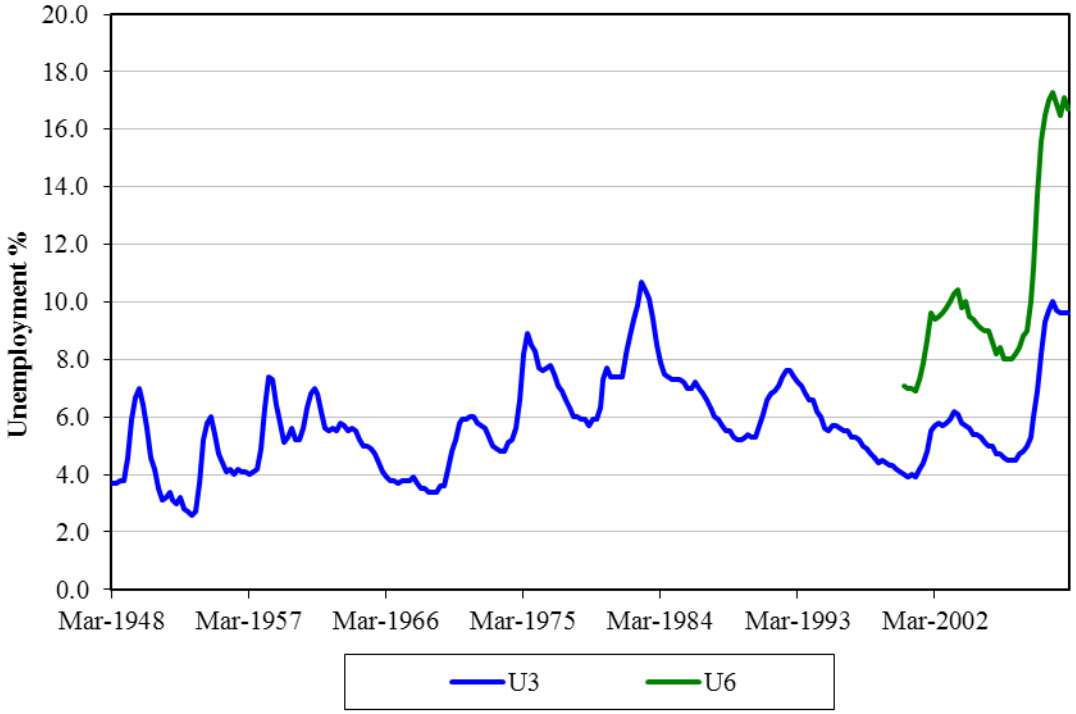


Source: Bloomberg. (2011)

History suggests that growth in fiscal spending and an expansion in the monetary base can be inflationary. This is because large, persistent fiscal deficits provide a strong incentive to print money to cover the shortfall. Additionally, in a fractional reserve banking system, increases in the monetary base have typically resulted in increases in the broader money supply. Thus far, this interaction of fiscal and monetary policy has not been inflationary. Why?

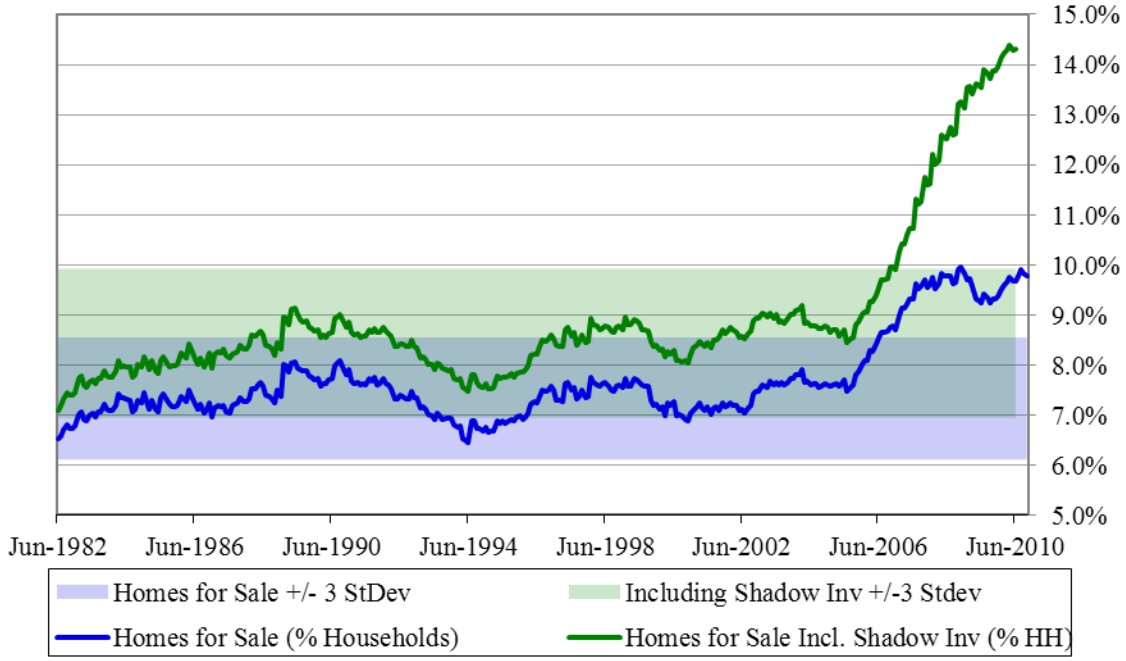
One explanation has to do with the motivation behind fiscal and monetary expansion. Recent deficit spending has only replaced corresponding declines in private sector spending at the onset of the financial crisis. In addition, the Federal Reserve's actions are not motivated by a desire to absolve blame for profligate fiscal policy, but rather to heal a troubled economy. Across a number of measures, the economy was and continues to appear weak. Three such examples, as illustrated in the following figures, include the state of the housing market, the labor market, and the general scope of spare capacity in the economy.

Figure 14: US Unemployment Rate



Source: Bloomberg. (2011)

Figure 15: Housing Market Values
Homes for Sale Including Shadow Inventory



Source: Bridgewater Associates, LP. (2011)

Figure 16: Spare Economic Capacity

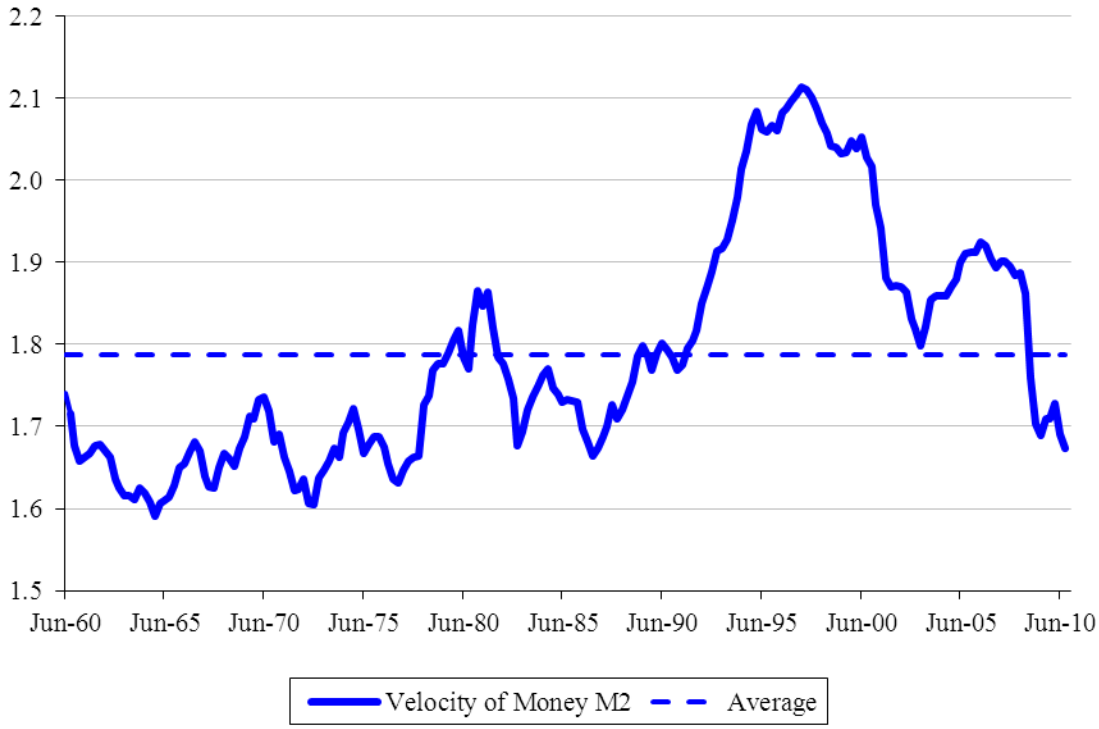
Asset Class As of December 31, 2010	Current Level (%)	Long-Term Average (%)	Excess Capacity (Std. Dev.)
Goods Sector			
Manufacturing capacity utilization	73.00	80.92	1.55
Services Sector			
Utilities capacity utilization	79.80	87.52	1.58
Housing/Real Estate Sector			
Rental vacancy rate*	10.30	7.29	1.91
Owner-occupied vacancy rate*	2.50	1.53	2.25
Labor Market			
Unemployment rate (U-3)	9.6	5.72	2.40
Underemployment rate (U-6)	16.7	10.25	1.99

*As of September 30, 2010

Source: Bloomberg. (2011)

Reluctant to extend credit in a weak economy, banks have opted to retain increases in the monetary base as excess reserves. This partially explains the drop in the velocity of money (shown below), or the average frequency in which money is spent over time.

Figure 17: Velocity of M2

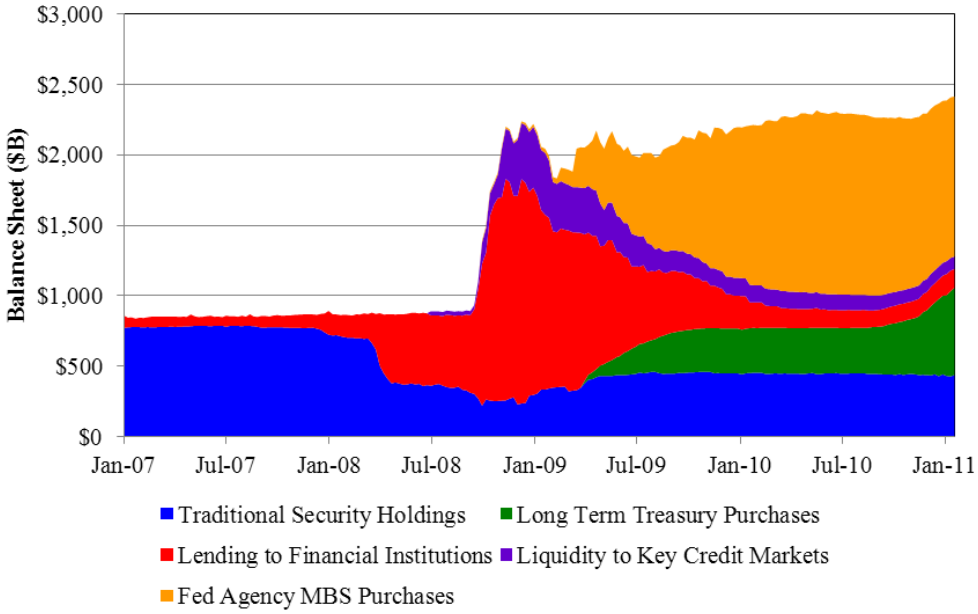


Source: Bloomberg. (2011)

An important question here is at what point will lenders be more optimistic with their economic outlooks and seek to extend loans to borrowers? In the past, we would expect this to lead to a growth in the money supply and to higher levels of inflation. Here, the Federal Reserve would seek to balance inflation and

growth by setting short-term interest rates. Unlike previous recessions, the Federal Reserve now has an expanded tool kit to combat rampant inflation. First, the Federal Reserve could sell portions of their portfolio and soak up excess liquidity. As seen in the chart below, the Fed's balance sheet has expanded rapidly in recent years.

Figure 18: Growth in Fed's Balance Sheet ($B)



Source: Bloomberg. (2011)

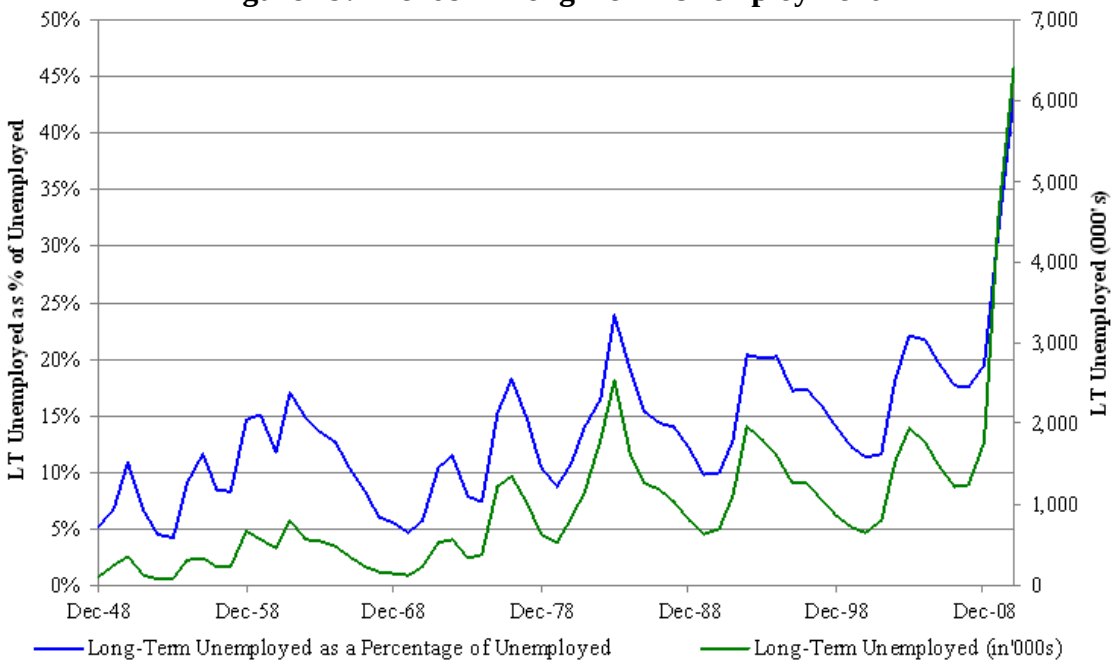
Second, through legislative changes enacted in 2008 the Federal Reserve can now pay interest on excess reserves. In the current environment this has been an unnecessary tool. But, as rates rise and lending begins to pick up, the Federal Reserve can raise the rate on which they pay reserves which would reduce lending growth and help prevent the increase in the monetary base from being inflationary.

These are unchartered waters and the ability and desire of the Federal Reserve to combat inflation when it does surface is uncertain. First, the Federal Reserve's new tools are untested and it remains to be seen whether it will be able to adequately orchestrate its monetary policy objectives. Second, a controlled higher rate of inflation may not be all bad for the economy as a whole. As referenced, the growth in both private and public sector credit is massive and a higher rate of inflation could reduce debt burdens in real terms while reducing the real cost of borrowing. Finally, even if the Fed can competently execute on its dual mandate of supporting employment and promoting stable prices it may be politically difficult to balance the two. The recent recession was deep and most forecasts point to a labor market that could take as long as a decade[3] to fully recover and will likely result in a higher level of natural unemployment[4] as reflected in the chart of long-term unemployment trends on the following page. In this environment, raising rates to control inflation could be difficult. Another factor to consider is how all of these pressures affect the US dollar, as inflationary pressures from a weakening dollar could "import inflation".

[3] http://online.wsj.com/article/SB125470053662262957.html

[4] See FRBSF Economic Letter 2011-05, published February 14, 2011, *"What is the New Normal Unemployment Rate?"*

Figure 19: Trends in Long-Term Unemployment



Source: Bureau of Labor Statistics

Considering all of the previously mentioned factors (some suggesting higher inflation and others lower inflation), RVK's forecast for long-term inflation is roughly in line with market expectations at 2.50%, while the standard deviation has increased to 3.00% due to the greater uncertainty surrounding key inflation drivers.

Cash Equivalents

The historical performance of short-term instruments, as measured by the Bank of America ML US 3-Month Treasury Bill Index as of December 31, 2010, indicates that cash equivalents have provided trailing returns of 6.03% and annual standard deviation of 3.75% since inception (1/1/1978). Its effective yield as of December 31, 2010 was 0.12% with an average yield of 2.91% since effective yield data became available (12/31/1996). The US 30 Day T-Bill Index reports similar returns as of December 31, 2010, providing returns of 3.62% with an annual standard deviation of 3.09% since inception (1/1/1926). Real returns for the Bank of America ML US 3-Month Treasury Bill Index have averaged approximately 2.17% annually since inception (1/1/1978). Real returns on US 30 Day T-Bill investments have averaged approximately 0.60% annually since inception (1/1/1926).

Using current yields (and the historical real return differential) as a guide, we set the long-term return expectation for Cash at 2.25% while increasing standard deviation to 3.00%.

FIXED INCOME

Summary

Figure 20: Fixed Income Assumptions

Asset Class	2010			2011			One Year Adjustment		
	Nominal Return (Arithmetic) %	Risk (Standard Deviation) %	Nominal Return (Compound) %	Nominal Return (Arithmetic) %	Risk (Standard Deviation) %	Nominal Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %
Int. Duration Fixed Income	5.00	5.00	4.88	4.50	5.50	4.36	-0.50	+ 0.50	-0.53
Non-US Fixed Income (Unhedged)	5.00	9.25	4.59	4.25	9.75	3.80	-0.75	+ 0.50	-0.80
TIPS	4.75	5.25	4.62	4..25	5.75	4.09	-0.50	+ 0.50	-0.53
Low Duration Fixed Income	3.75	3.00	3.71	3.00	3.50	2.94	-0.75	+ 0.50	-0.77
Long Duration Fixed Income	5.25	10.00	4.78	5.25	10.50	4.73	0.00	+ 0.50	-0.05
High Yield	7.00	14.00	6.10	6.75	14.50	5.78	-0.25	+ 0.50	-0.32

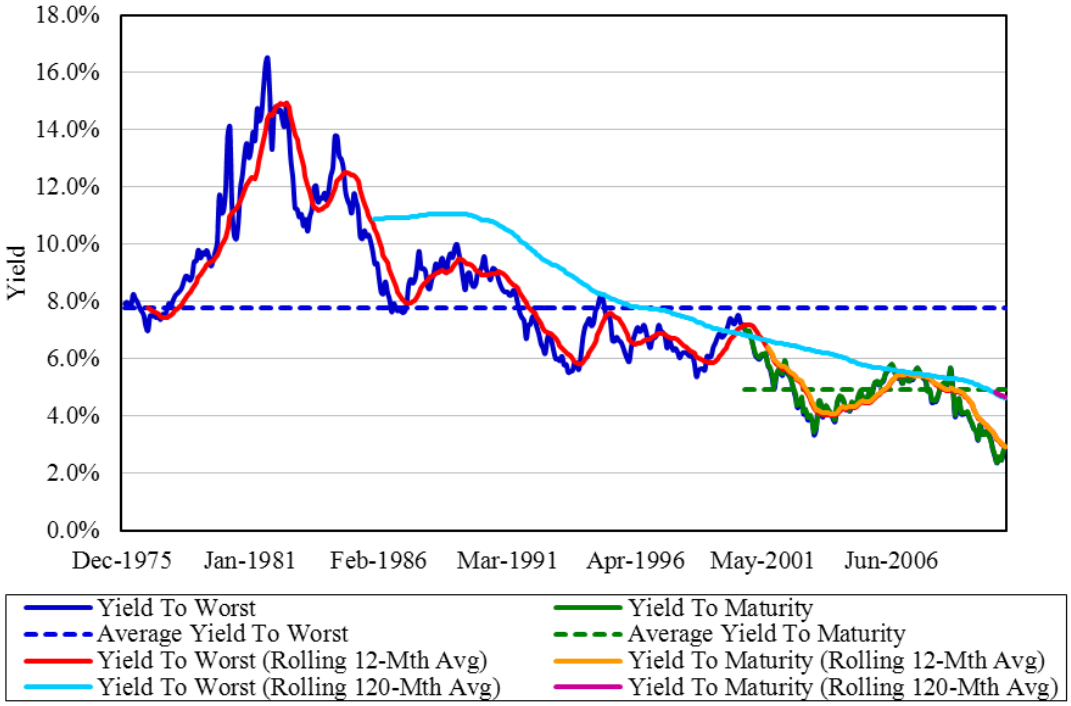
US Intermediate Duration Fixed Income

RVK analyzes core investment-grade fixed income investments over recent history (since 1976) using the Barclays Capital US Aggregate Bond Index. As of December 31, 2010, the arithmetic average return was 8.53% for the longest available time period (35 years) and 5.84% over the past ten years. However, it should be noted that the since inception return captures a period of high and declining interest rates. Given the current low interest rate environment relative to historic levels, we foresee a challenging environment for fixed income instruments over the next 10 years or so.

The yield to maturity for the Barclays Capital US Aggregate Bond Index averaged 4.45% over the past ten calendar years. As of December 31, 2010, the Barclays US Aggregate Index's yield to maturity was 2.97% and its modified duration was 4.98. The trailing 10-year and 30-year annualized standard deviations were 2.30% and 7.07%, respectively, based on calendar year returns. The average option adjusted spread for the Barclays Capital US Aggregate Bond Index relative to the duration neutral Treasury curve has been 0.72% over the past ten calendar years, and was 0.56% as of December 31, 2010.

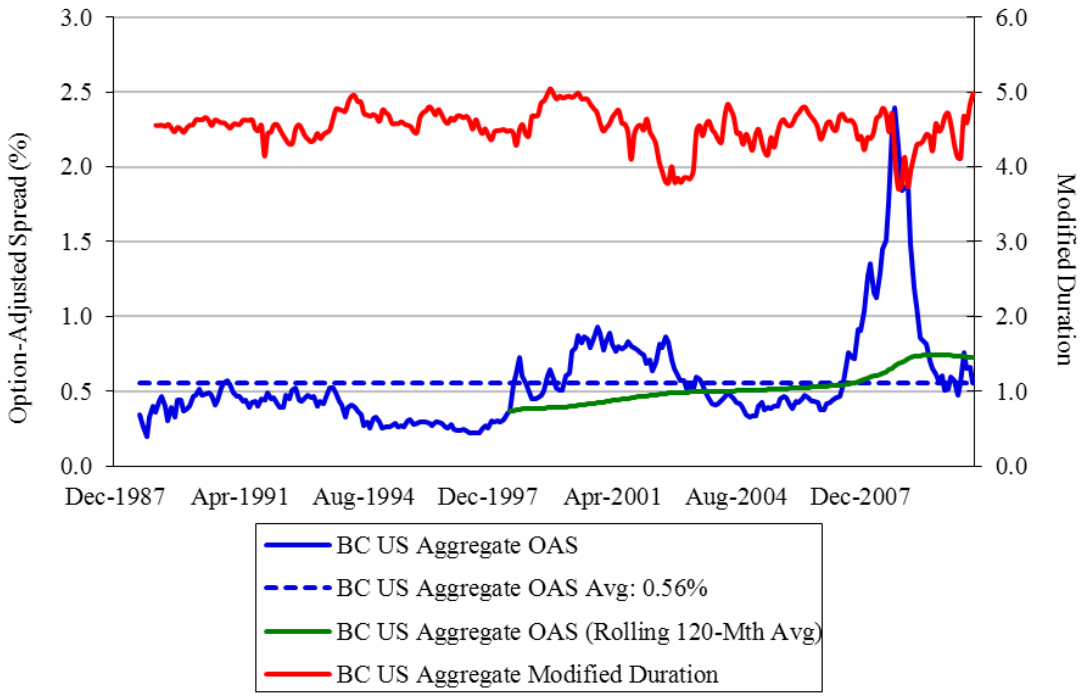
RVK lowered our long-term return forecast for US Intermediate Duration Fixed Income to 4.50%, given the lower current yield and the potential for interest rate increases (particularly short-to-intermediate rates given the steepness of the yield curve relative to history). With regard to standard deviation, we increased our forecast to 5.50%. Although index volatility has been decreasing over recent years, we believe there is the potential for additional volatility given the economic uncertainties and subsequent interest rate movements. The following figures display several trends cited in our analysis.

Figure 21: Barclays Capital US Aggregate Bond Index
Yield to Worst and Yield to Maturity



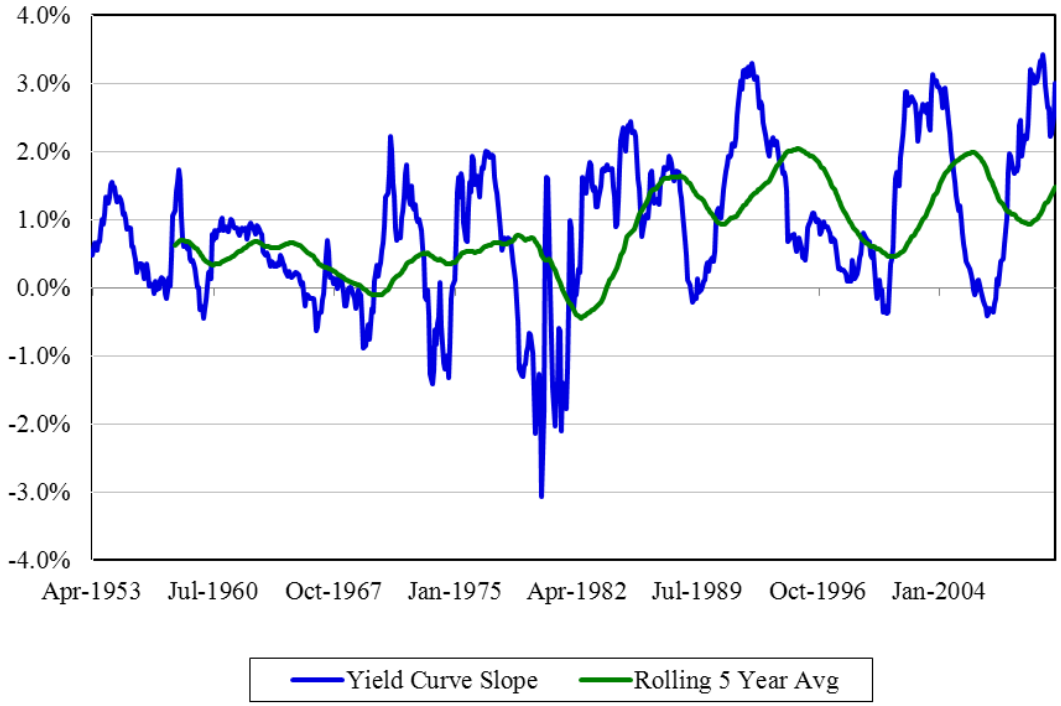
Source: Barclays Capital Live. (2011)

Figure 22: Barclays Capital US Aggregate Bond Index
Option-Adjusted Spread and Modification Duration



Source: Barclays Capital Live. (2011)

Figure 23: Market Cycle: Yield Curve Slope
10 Year – 1 Year



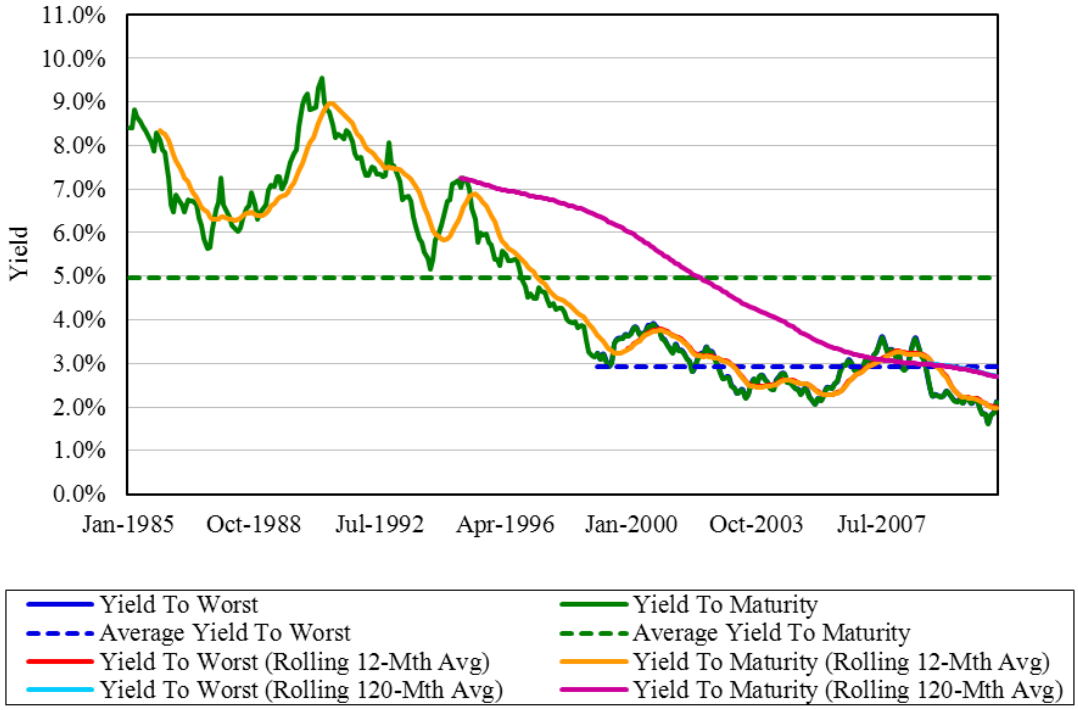
Source: US Department of the Treasury. (2011)

Non-US Fixed Income

RVK analyzes non-US government bond investments using the Citigroup Non-US World Government Bond Index ("Citi Non-US WGB Index") USD Unhedged as a proxy for this asset class. We use the USD Unhedged index to eliminate the impact of currency hedging decisions. We believe that while currency does not structurally add value over the long-term as a strategic allocation, it could be a source of alpha for a Non-US Fixed Income mandate. The average option adjusted spread for the Citi Non-US WGB Index USD Unhedged relative to the duration neutral Treasury curve was 0.07% over the past ten calendar years, and was 0.40% as of December 31, 2010. As of December 31, 2010, the yield to maturity was 2.12% with a modified duration of 6.75 (Barclays Capital US Aggregate Bond Index was 4.97) and a standard deviation of 12.38% based on calendar year returns since inception. The credit quality continues to remain similar to (or better than) the Barclays Capital US Aggregate Bond Index, and was AA+ rated as of December 31, 2010. Also, while the duration is longer than the Barclays Capital US Aggregate Bond Index, the current yields are lower.

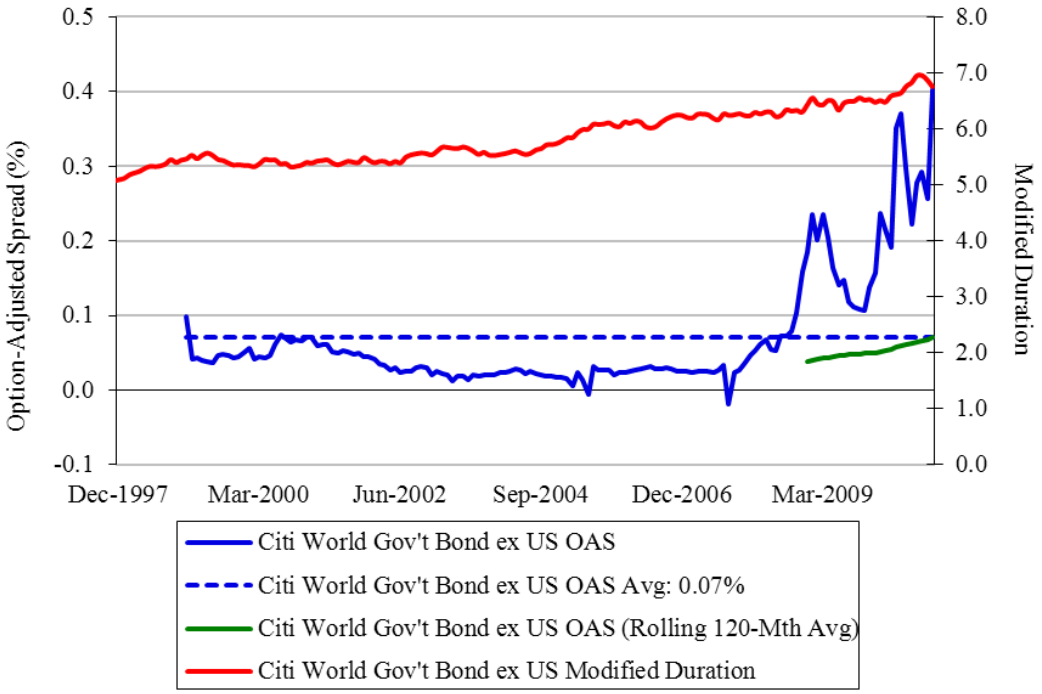
The long-term return forecast for Non-US Fixed Income has been lowered to 4.25%, while the forecast for standard deviation increased to 9.75%.

Figure 24: Citi Non-US World Government Bond Index
Yield to Worst and Yield to Maturity



Source: The Yield Book, Inc. (2011)

Figure 25: Citi Non-US World Government Bond Index
Option-Adjusted Spread and Modified Duration



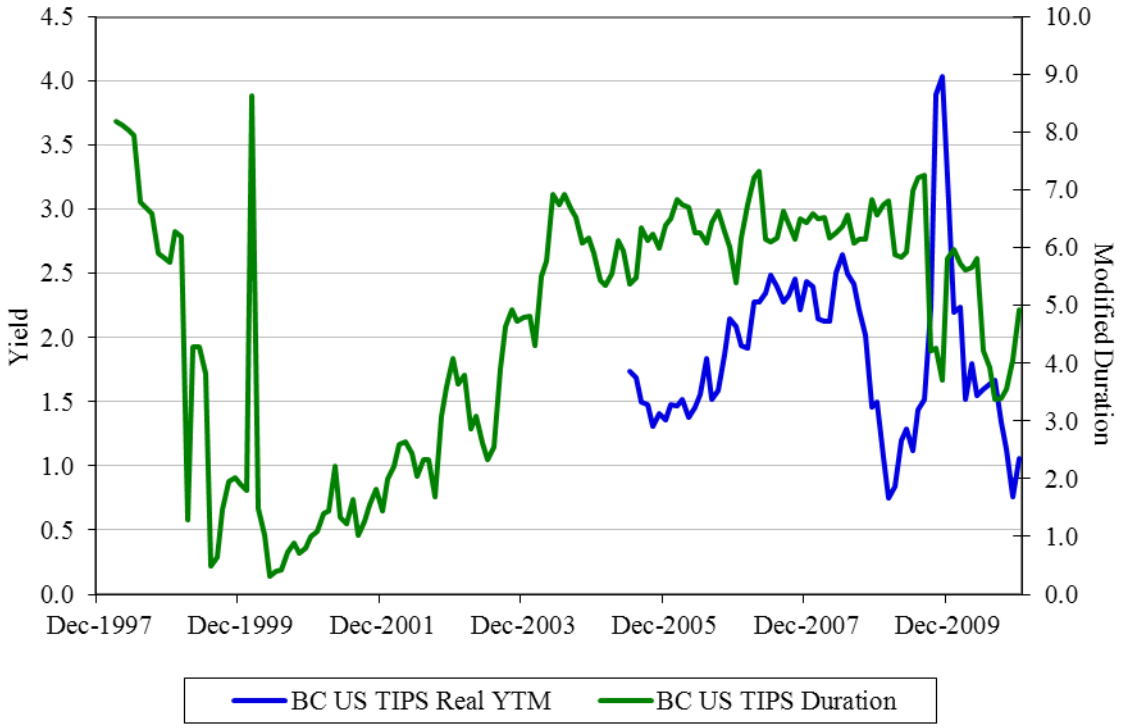
Source: The Yield Book, Inc. (2011)

Treasury Inflation Protected Securities ("TIPS")

TIPS are a fairly immature asset class in the United States, and hence the selected performance history of the Barclays Capital US TIPS Index is limited. TIPS are inflation-linked securities whereby the principal is adjusted relative to the index ratio CPI-U. The coupon is fixed relative to principal with semi-annual interest payments. As of December 31, 2010 the duration of the Barclays Capital US TIPS Index was 5.50 (the Barclays Capital US Aggregate Bond Index was 4.97) with a real yield of 0.51% and a trailing 10-year annualized standard deviation of 5.63% based on calendar year returns. RVK forecasts inflation to be 2.50%.

We have reduced the long-run return forecast for TIPS to 4.25% with standard deviation increased to 5.75%.

Figure 26: US Treasury and TIPS Real Yield



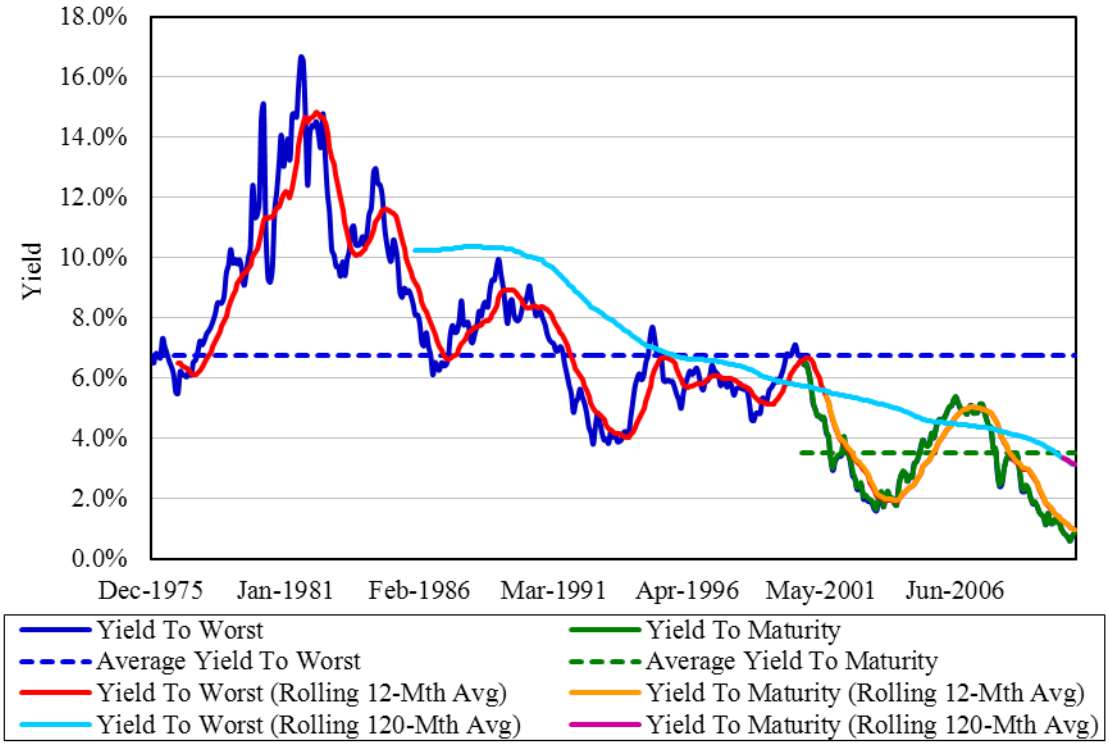
Source: Barclays Capital Live. (2011)

Low Duration Fixed Income

Low duration strategies are typically managed against the Barclays Capital US 1-3 Year Gov't/Credit Index. As of December 31, 2010, the yield to maturity of the Barclays Capital US 1-3 Year Gov't/Credit Index was 0.87% with a modified duration of 1.85. The trailing 10-year annualized standard deviation was 2.38% based on calendar year returns.

We have lowered our long-term return expectation for Low Duration Fixed Income strategies to 3.00% with standard deviation increased to 3.50%.

Figure 27: Barclays Capital US 1-3 Year Gov't/Credit Index
Yield to Worst and Yield to Maturity



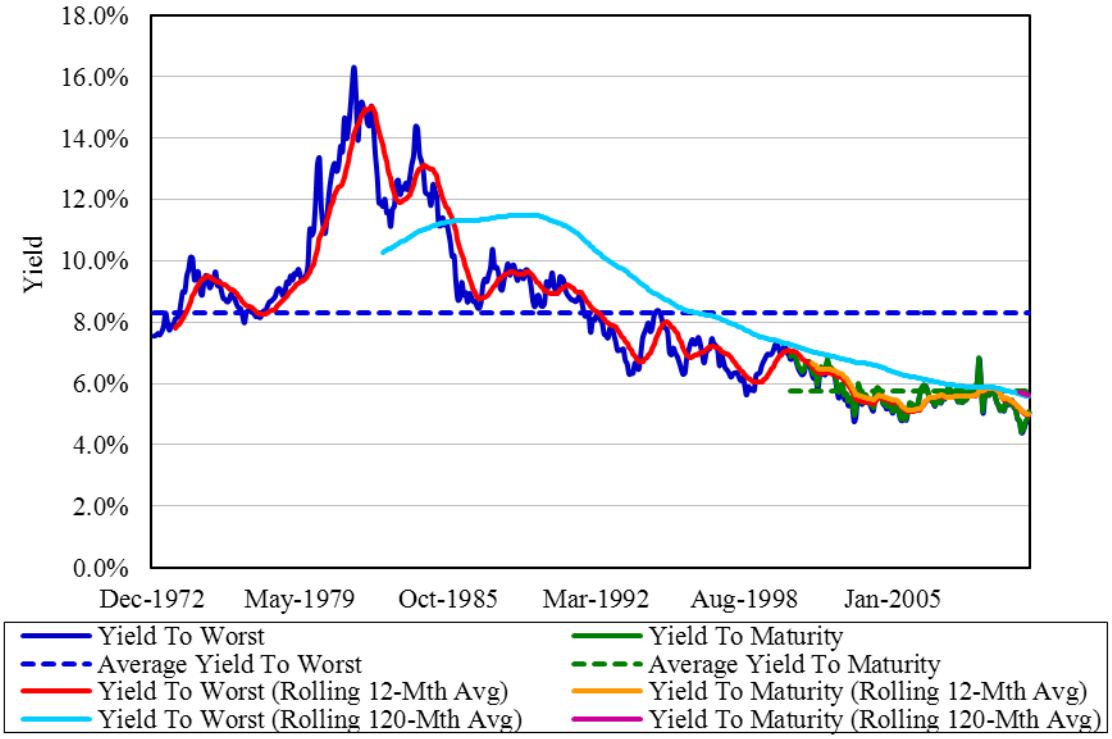
Source: Barclays Capital Live. (2011)

Long Duration Fixed Income

Over the longest comparable time period, the average annual yield-to-maturity spread between the Barclays Capital US Long Gov't/Credit Index and the Barclays Capital US Aggregate Bond Index has been 0.92% through 2010. The average spread between the arithmetic annual returns has been 1.21% since 1976. Over the last 10 years and 20 years, the average annual differentials have been 1.31% and 1.68%, respectively. As of December 31, 2010, the yield to maturity on the Barclays Capital US Long Gov't/Credit Index was 5.10% and its modified duration was 12.86. The trailing 10-year and 30-year annualized standard deviations were 3.71% and 10.95%, respectively, based on calendar year returns. Spreads remain above rolling and long-run averages as of December 31, 2010.

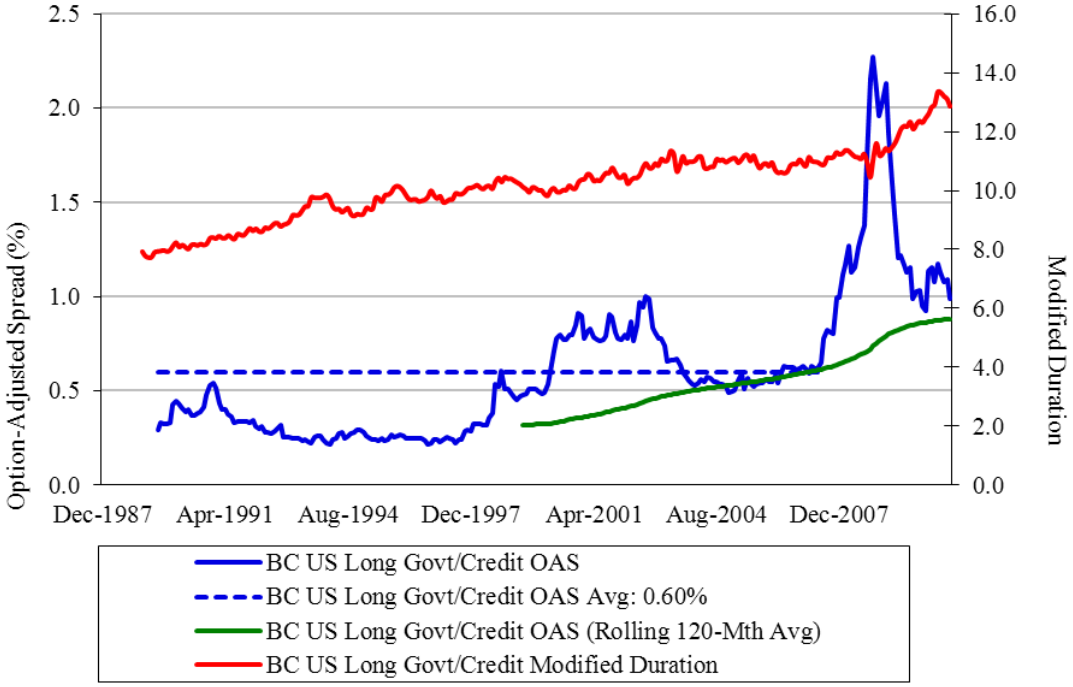
Given current yields, we kept our long-term return expectation for Long Duration Fixed Income strategies at 5.25% and increased standard deviation to 10.50%.

Figure 28: Barclays Capital US Long Gov't/Credit Index
Yield to Worst and Yield to Maturity



Source: Barclays Capital Live. (2011)

Figure 29: Barclays Capital US Long Gov't/Credit Index
Option-Adjusted Spread and Modified Duration



Source: Barclays Capital Live. (2011)

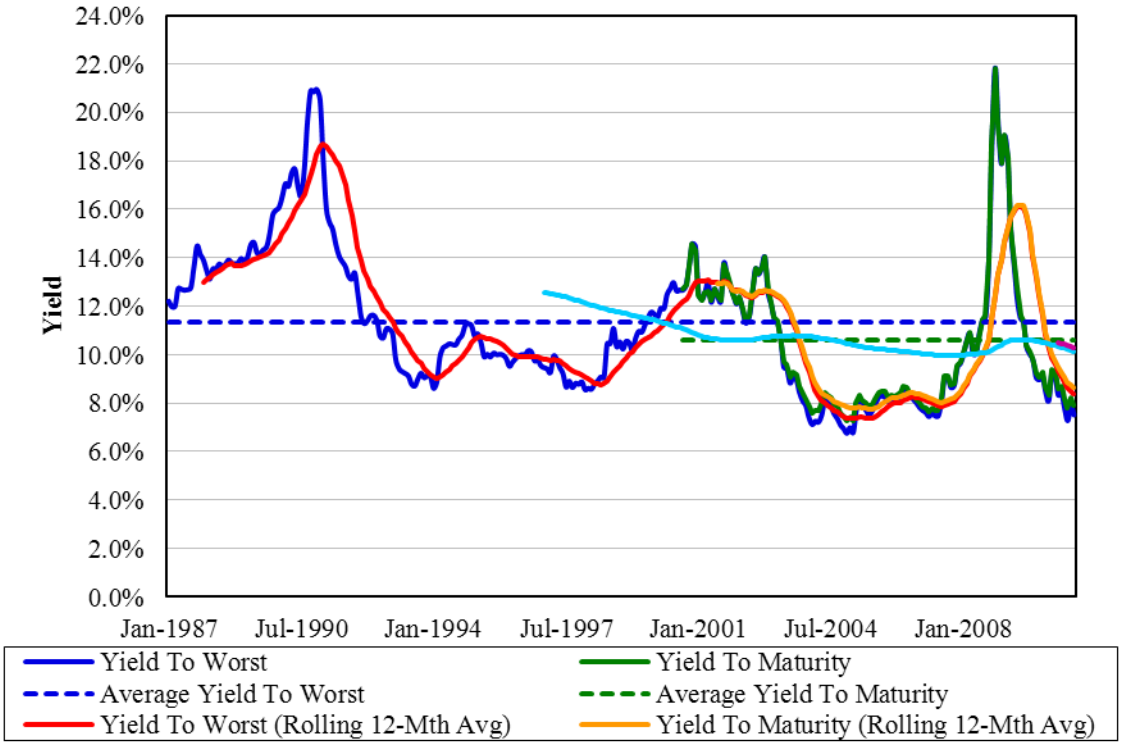
High Yield Fixed Income

One approach to High Yield Fixed Income assumptions is to model an expectation of the credit quality premium added to US Intermediate Fixed Income to account for default risk. This premium can be estimated by the difference in the average yield-to-maturity between the Barclays Capital US Corporate High Yield Index and the Barclays Capital US Aggregate Bond Index, which was equal to 5.96% over the last 10 calendar years ending December 31, 2010. The average option adjusted spread (based on monthly frequency) for the Barclays Capital US Corporate High Yield Index has been 5.23% over the last 17 years, and was at 5.26% as of December 31, 2010.

High Yield Fixed Income is expected to be significantly more volatile than US Intermediate Fixed Income. We estimate that, given the combination of default and recovery risk, volatility in excess of double that of US Intermediate Fixed Income is reasonable. As of December 31, 2010, the yield to maturity for the Barclays Capital US Corporate High Yield Index was 7.90% and its modified duration was 4.32. The trailing 10-year and 20-year annualized standard deviations were 21.83% and 18.12%, respectively, based on calendar year returns.

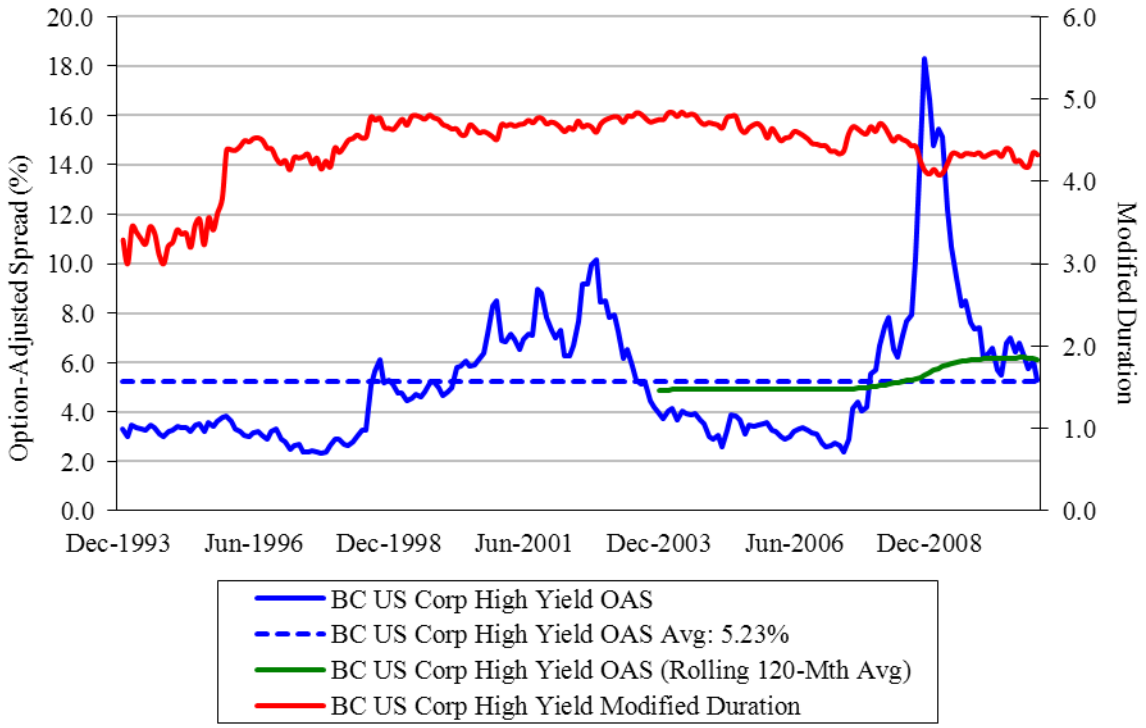
RVK forecasts the long-term return for High Yield Fixed Income to be 6.75% with a standard deviation of 14.50%.

Figure 30: Barclays Capital US Corporate High Yield Index
Yield to Worst and Yield to Maturity



Source: Barclays Capital Live. (2011)

Figure 31: Barclays Capital US Corporate High Yield Index
Option-Adjusted Spread and Modified Duration



Source: Barclays Capital Live. (2011)

US AND INTERNATIONAL EQUITY ASSUMPTIONS

Figure 32: US and International Equity Asset Class Assumptions

Asset Class	2010			2011			One Year Adjustment		
	Nominal Return (Arithmetic) %	Risk (Standard Deviation) %	Nominal Return (Compound) %	Nominal Return (Arithmetic) %	Risk (Standard Deviation) %	Nominal Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %
US Equity									
Large/Mid Cap	8.00	17.50	6.61	8.00	17.75	6.57	0.00	+0.25	-0.04
Small/Mid Cap	9.00	21.50	6.94	8.75	21.75	6.64	-0.25	+0.25	-0.30
Broad Market	8.15	17.75	6.76	8.15	18.10	6.67	0.00	+0.35	-0.06
International Equity									
Dev'd Large/Mid Cap Int'l	8.25	18.50	6.70	8.00	18.75	6.41	-0.25	+0.25	-0.29
Dev'd Small/Mid Cap Int'l	9.25	22.50	7.00	8.75	22.75	6.45	-0.50	+0.25	-0.56
Emerging Markets	10.50	28.00	7.11	10.50	28.50	7.00	0.00	+0.50	-0.12
Broad International	8.60	19.15	6.95	8.65	20.10	6.84	+0.05	+0.95	-0.11
Global Equities	8.32	17.10	6.99	8.45	17.85	7.01	+0.13	+0.75	+0.02

US EQUITY ASSUMPTIONS

Summary

We used data as of December 31, 2010 as the baseline for our assumptions and to inform the direction and magnitude of change from the previous year's assumptions.

Our analysis begins by modeling risk and return characteristics of Large/Mid Cap US Equities using the Standard & Poor's 500 Index ("S&P 500 Index"). We selected this index due to the extensiveness of its historical record and its similarities to a Large/Mid Cap US Equity portfolio with regard to sector and capitalization, including 20% exposure to mid cap stocks with $2 billion to $15 billion in market cap. Large/Mid Cap US Equity serves as a baseline for all other equity sub asset classes; therefore the analysis for this asset class was extensive.

The primary methodology for estimating US Equity returns is a bottom-up decomposition model, whereby RVK gathered long-term data regarding key equity return drivers, including current dividend yield, historical earnings growth, and historical price/earnings ratio. After generating a return estimate using this methodology, we also used mean reversion and bond + equity risk premium calculations to refine our final equity assumption.

In addition to return estimates, we also estimated asset class volatility. Volatility estimation is relatively straightforward, as we simply combined historical volatility analyses with slight adjustments to account for emerging trends.

Our 2011 assumptions for the three US equity sub asset classes are listed on the following page. In addition, detailed results for each sub-asset class are presented on the following pages.

Figure 33: US Equity Asset Class Assumptions									
Asset Class	2010			2011			One Year Adjustment		
	Nominal Return (Arithmetic) %	Risk (Standard Deviation) %	Nominal Return (Compound) %	Nominal Return (Arithmetic) %	Risk (Standard Deviation) %	Nominal Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %
Large/Mid Cap	8.00	17.50	6.61	8.00	17.75	6.57	0.00	+0.25	-0.04
Small/Mid Cap	9.00	21.50	6.94	8.75	21.75	6.64	-0.25	+0.25	-0.30
Broad Market	8.15	17.75	6.76	8.15	18.10	6.67	0.00	+0.35	-0.06

Large/Mid Cap US Equity

Return Decomposition

Our method of return decomposition is based on the Grinold & Kroner model, which is a methodology included in the CFA Institute's Candidate Body of Knowledge ("CBOK"). The method decomposes equity return expectations into the following key drivers: Dividend Yield, Earnings Growth, Inflation, and change in Price/Earnings Ratio. It is important to note, however, that RVK modified the model by using historical averages as inputs to provide an objective starting point and to limit estimation error due to forecasting biases. RVK also excluded share buy backs in the analysis, as the impact of share buy backs is already embedded in our earnings per share growth calculation. Including share buy backs as a separate factor would amount to double counting. Finally, we excluded inflation from the calculation, as it is treated separately in the RVK analysis. Factors included in the RVK derivation of the Grinold & Kroner formula are presented in **Figure 34** below.

Figure 34: Returns Decomposition

$$\hat{R}_i = \frac{D}{P} + g + \Delta\left(\frac{P}{E}\right)$$

$\hat{R}_i$ = Expected Index Return

$\frac{D}{P}$ = Dividend Yield (Trailing 12 Months)

g = Historical Average Earnings per Share Growth

$\Delta\left(\frac{P}{E}\right)$ = Expected Change in Price/Earnings Ratio

Source: CFA Institute Candidate Body of Knowledge. (2010).

The result of our analysis is a 10-year real return estimate of 4.03% as of December 31, 2010. Values for each factor in the decomposition formula are listed below and described in the later section, entitled "Returns Decomposition Factor Set and Background."

$\frac{D}{P}$ = 1.83% (trailing 12-month dividend yield as of 12/31/10)

g = 4.45% (85-year average of rolling 10-year average of annual Y/Y earnings growth rate)

$\Delta\left(\frac{P}{E}\right)$ = -2.25% (change in current P/E 10-year average to 85-year average)

$\hat{R}_i$ = 4.03% (expected 10-year average real return)

This real output would then be added to the inflation estimate of 2.50% for a nominal return of 6.53%. This analysis suggests a downward adjustment is warranted from the 2010 estimate of an 8.00% average nominal return.

To further inform our estimate, we considered the output of a mean reversion and bond yield + risk premium approach. We review these analyses in the next two sub-sections.

Mean Reversion

Mean reversion is a theory that suggests that returns eventually move back toward the long-term average. As such, if trailing returns are depressed, mean reversion predicts that future returns may exceed the historical average and vice versa. However, we must be careful when using this analysis close to extreme market events, as this can potentially lead to forecasting back-to-back outlier events. **Figure 35** demonstrates the impact of mean reversion by showing the required real return over the next 10-year period that is necessary for the overall market cycle average return to equal the long-term average of 8.95%.

Figure 35: Mean Reversion of S&P 500 Real Returns

		20-Year Period		30-Year Period		40-Year Period	
	Return since 1926	Last 10 Years	Return over Next 10 Years	Last 20 Years	Return over Next 10 Years	Last 30 Years	Return over Next 10 Years
S&P 500	8.95%	1.39%	**17.07%**	8.69%	**9.47%**	9.16%	**8.32%**

Note: Only minor changes would occur if pre-WWII returns were excluded, as the US economy could be considered a more developed nation post-WWII. However, post-WWII returns are quite similar to 1926 since inception returns at 8.40% since 1946 (or 8.53% since 1952).

Sources: Standard & Poor's. (2010); US Department of Commerce - Bureau of Economic Analysis. (2010).

As illustrated in **Figure 35**, this analysis suggests an upward revision to the 2010 assumption. Even taking the most conservative estimate of an 8.32% real return and adding our inflation assumption of 2.50% would suggest a 10.82% nominal return.

Bond Yield + Risk Premium

This method simply adds an estimated equity risk premium to the 10-year US Treasury yield to generate a return estimate. On December 31, 2010, the nominal 10-year US Treasury yield was 3.30%.

In order to estimate the equity risk premium we considered the return on the S&P 500 Index versus the Ibbotson Long-Term Gov't Bond Index over rolling 10 year periods and differing horizons. Equity premium estimates based on various time periods of analysis are presented in **Figure 36**.

Figure 36: Estimated Equity Risk Premium (S&P 500 vs. Ibbotson Long Term Gov't Bond Index)	
Trailing Period	**Average Risk Premium**
85 Years	5.47%
50 Years	3.03%
30 Years	0.81%
10 Years	-6.87%

Sources: Standard & Poor's. (2010); Ibbotson Associates. (2010).

Using the since inception historical average of 5.47%, adding the 3.30% 10-year Treasury yield (as of December 31, 2010), and netting out our 2.5% inflation expectation, the model estimates a 6.27% real return (and 8.77% nominal return). This is above the decomposition-based estimate of 4.03%. All other time periods result in estimates below the 4.03% decomposition estimate. Hence, taken as a whole, this methodology suggests a slight downward revision to the 2010 assumption.

Final Assumption

Only the returns-based mean reversion analysis suggests an increase from the previous year's assumption. The fundamental and valuation-sensitive methods suggest a downward revision. After considering the mixed results of these three models, we are keeping the previous year's assumption of a 10-year US equity nominal return of 8.00%.

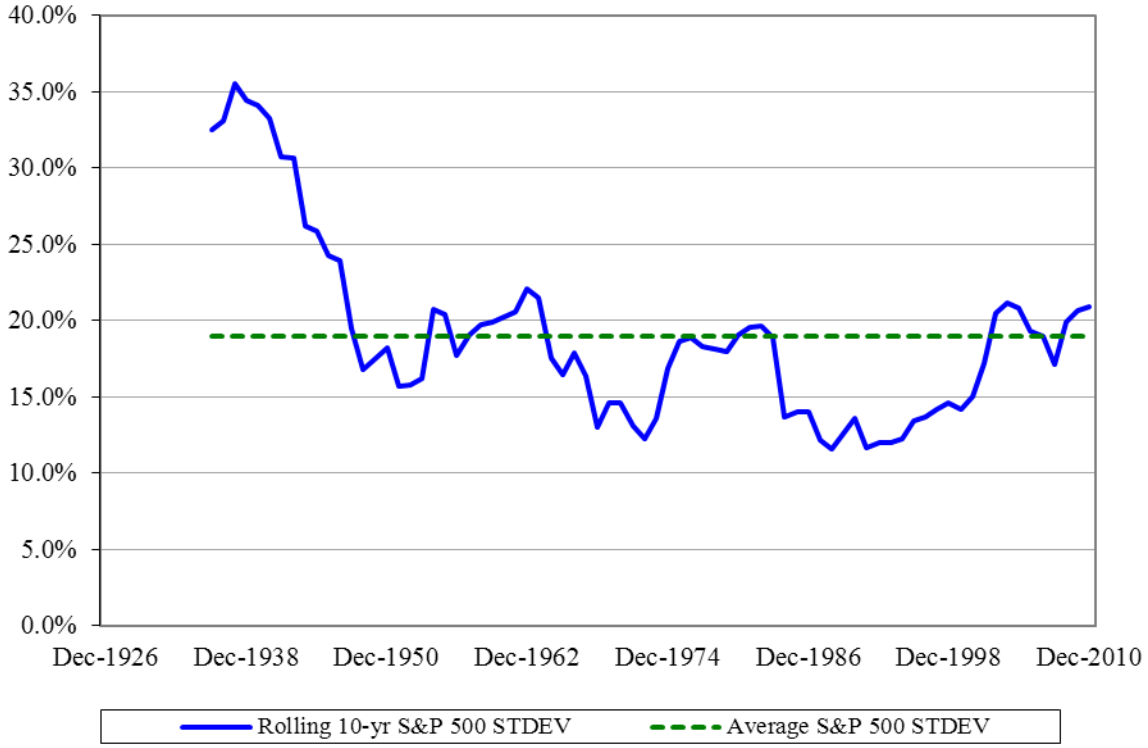
Volatility

Large/Mid Cap US Equity returns have historically exhibited a high degree of volatility. Since 1926 the annual standard deviation of S&P 500 Index returns was 20.38%. Over a more recent time period (since 1981), it has been 17.31%. However, over the last 20-year period, volatility has been closer to the long-term annual standard deviation of S&P 500 Index returns. **Figure 37** below shows the historical volatility of the S&P 500 Index according to various time periods, and **Figure 38** shows the rolling 10-year volatility of the S&P 500 Index since inception.

Figure 37: Historical S&P 500 Volatility	
Trailing Period	**Average Standard Deviation**
1926 – Present	20.38%
30 Years	17.31%
20 Years	19.22%
10 Years	20.87%

Sources: Standard & Poor's. (2010); US Department of Commerce - Bureau of Economic Analysis. (2010).

Figure 38: Rolling 10-Year S&P 500 Standard Deviation



Sources: Standard & Poor's. (2010); US Department of Commerce - Bureau of Economic Analysis. (2010).

As indicated in the previous figures, volatility has generally declined since the first two decades of inception for the S&P 500 Index, but appears to have risen moderately over the past decade. As a result, we set our volatility assumption at 17.75%, which is 0.25% higher than our 2010 assumption and 0.44% higher than the 30-year standard deviation of 17.31%.

Small/Mid Cap US Equity

Average Historical Real Return Premium

To create an estimated real return assumption of Small/Mid Cap US Equities, RVK evaluated the historical real return premium of the Ibbotson Small Stock Index versus the S&P 500 Index. While the Ibbotson Small Stock Index offers a reasonable starting point, it is important to note that risk and return characteristics of the index are biased upward due to the inclusion of micro cap stocks. Therefore, we also evaluated risk and return characteristics of the Russell Small and Small/Mid Cap indices, which lack the micro cap bias and, therefore, show considerably lower return premiums.

Another consideration is that the return premium for small cap stocks versus larger cap stocks has decreased over time due to increased demand for these securities over the last several decades. **Figure 39** shows the average annual return premium for several small cap indices with varying ranges of capitalization exposure. **Figure 40** shows rolling 10-year excess return for the Ibbotson Small Stock Index.[5] Finally, **Figure 41** shows 1-year rolling excess return for the Ibbotson Small Stock, Russell 2000, and Russell 2500 indices.

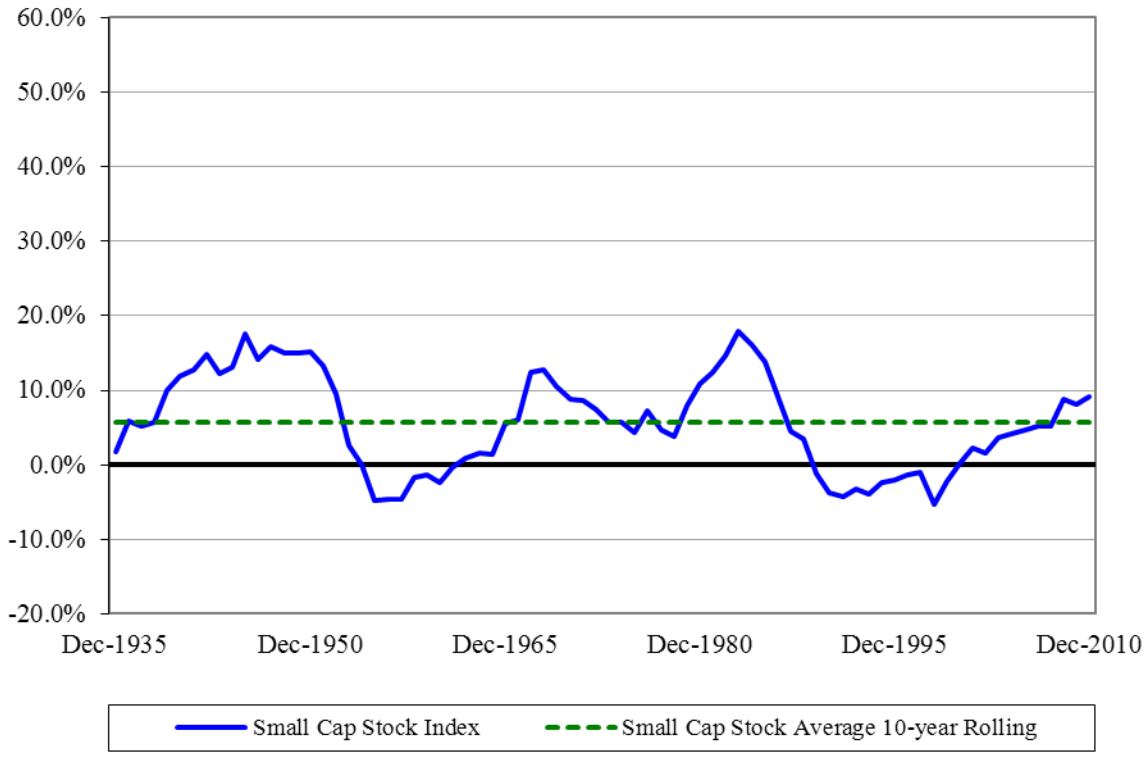
[5] Rolling 10-year returns for the Russell 2000 Index and Russell 2500 Index are not included due to limited historical data.

Figure 39: Return Premiums for Small/Mid Cap US Equity Indices versus the S&P 500 Index (1979-2010)			
Trailing Period	Ibbotson Small Stock	Russell 2000	Russell 2500
Since Inception (31 Years)	2.75%	0.51%	1.69%
20 Years	4.67%	1.68%	2.96%
10 Years	9.15%	5.29%	6.09%

Note: 32 years is the longest common period for the 3 indices.

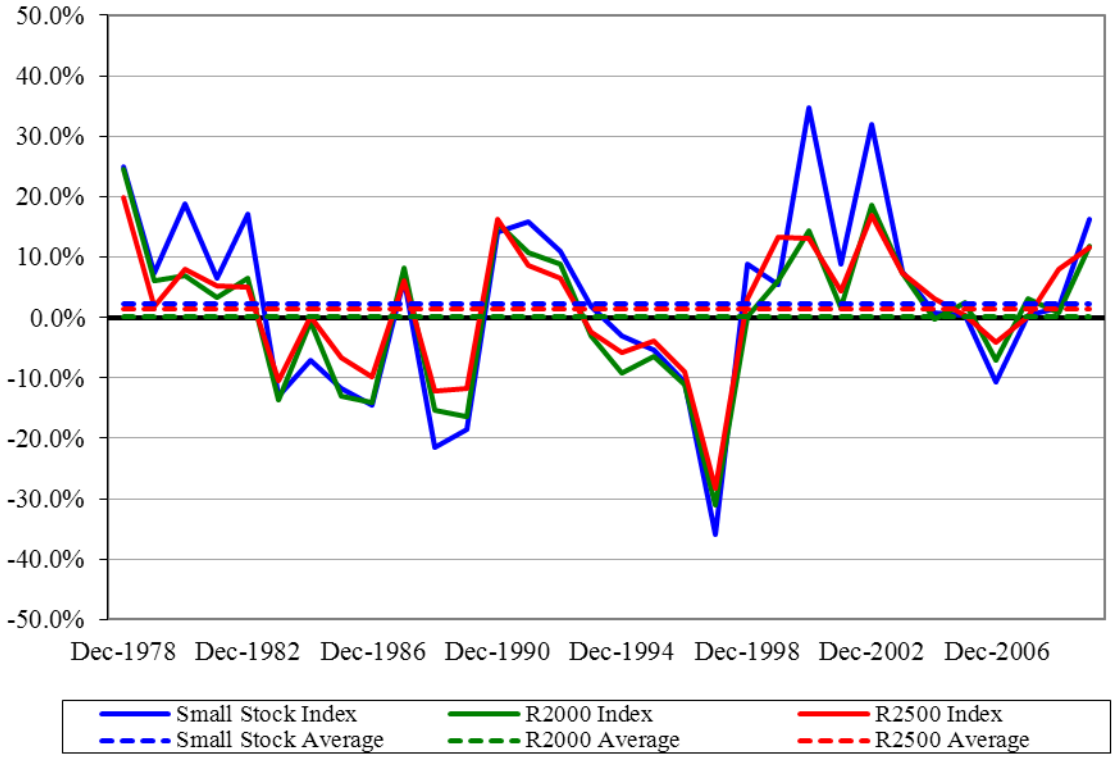
Sources: Standard and Poor's. (2010); Russell Investments. (2010); Ibbotson Associates. (2010).

Figure 40: Small Cap Premium (Nominal)
1-Year Rolling 10-Year Excess Return vs. S&P 500



Sources: Standard and Poor's. (2010); Russell Investments. (2010); Ibbotson Associates. (2010).

Figure 41: Small Cap Premium (Nominal)
1-Year Rolling 1-Year Excess Return vs. S&P 500



Sources: Standard and Poor's. (2010); Russell Investments. (2010); Ibbotson Associates. (2010).

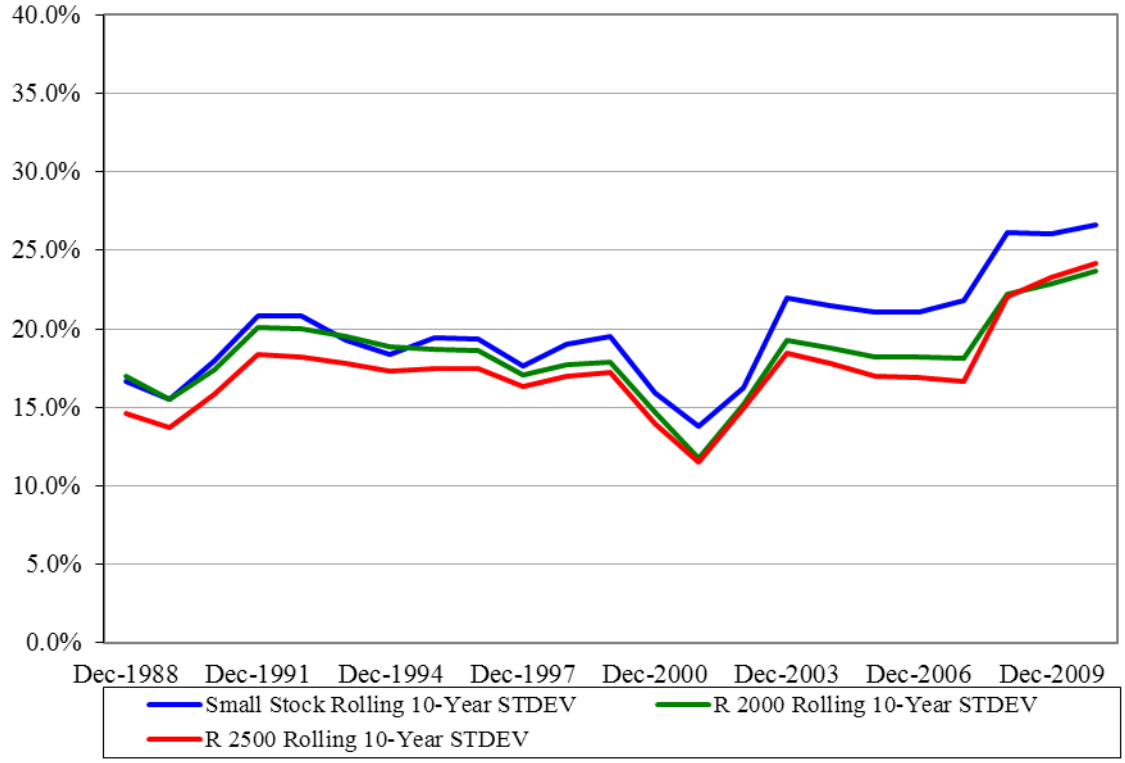
Final Assumption

Considering the influence of micro cap stocks in the Ibbotson Small Stock Index returns and the increased demand for small cap stocks in portfolios, we believe the estimated premium should more closely match the premiums of the Russell 2000 Index and Russell 2500 Index. Over the past 32-year period, the Russell 2000 Index and Russell 2500 Index had return premiums of 0.51% and 1.69%, respectively. Given the decrease in return premium for small cap stocks overtime, we have set our 2011 premium assumption at 0.75%, a 0.25% reduction from last year's assumption. The total nominal Small/Mid Cap Equity expected return is now set at 8.75%, a reduction of 0.25% due to our lower small cap premium.

Volatility

Small/Mid Cap US Equities have experienced substantial volatility in the past. The standard deviation of annual returns since 1979, as proxied by the Ibbotson Small Stock Index, Russell 2000 Index, and Russell 2500 Index has been 20.29%, 18.82%, and 18.12%, respectively. However, more recently, volatility has increased for all of these indices. For example, over the past 10 years, the standard deviation of returns was 26.60% for the Ibbotson Small Stock Index. **Figure 42** shows the rolling 10-year standard deviation of returns for the three indices since 1979.

Figure 42: Rolling 10-Year Standard Deviation



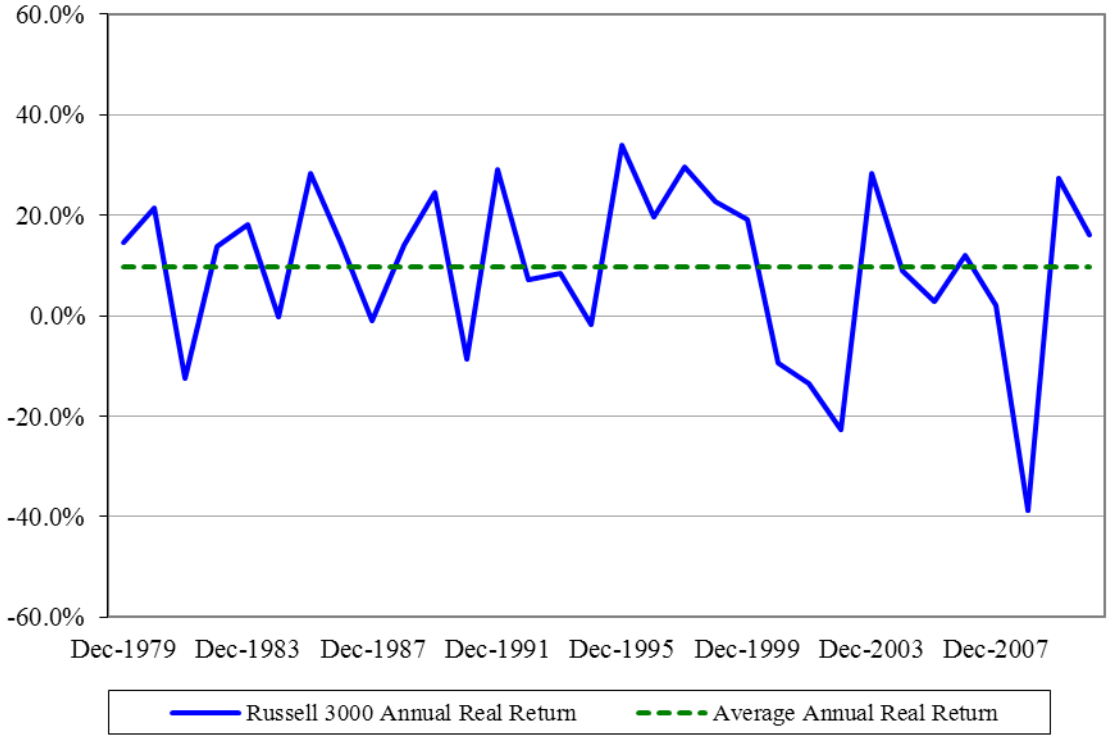
Sources: Russell Investments. (2010); Ibbotson Associates. (2010).

Balancing recent volatility increases with the overall history, we estimate forward looking volatility to be approximately 21.75% per year, which is an increase of 0.25% over the previous year's assumption, but moderately lower than current market levels.

Broad US Equities

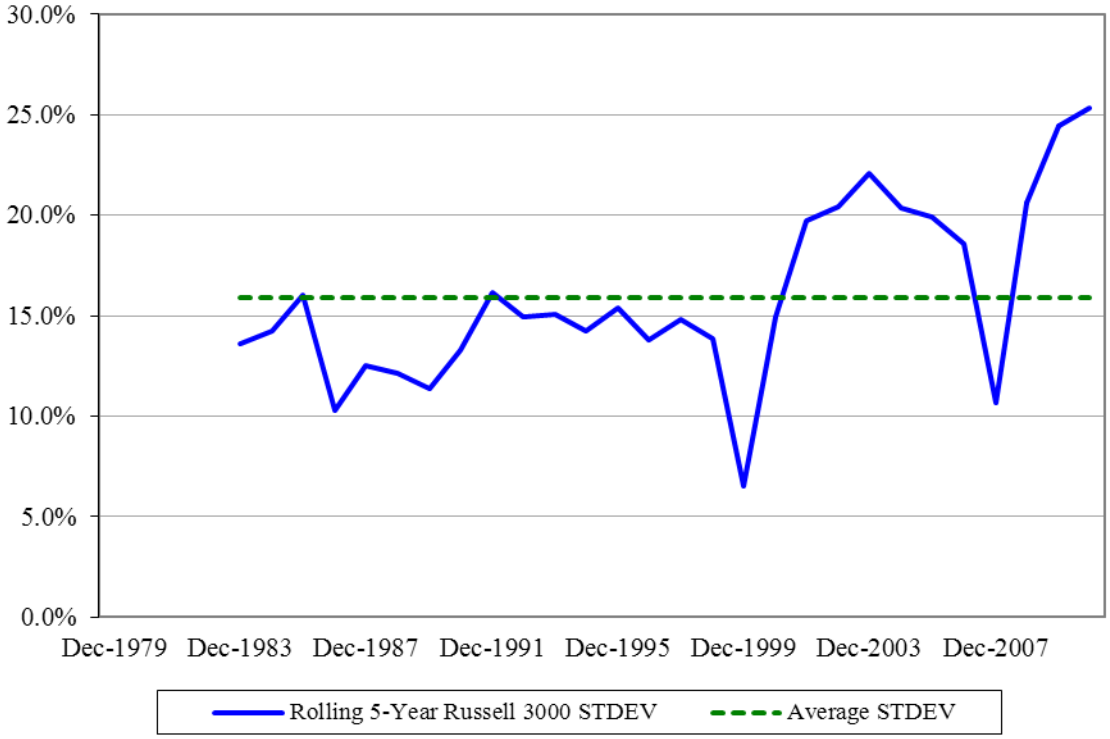
US Equity for the broad market can be represented by the Russell 3000 Index. Market capitalization statistics suggest that this index is dominated by the performance of larger securities (83% above $5 billion). Using a weighted average of our Large/Mid Cap and Small/Mid Cap estimates, we estimate that broad market equity exposure will realize an annual return of 8.15% with 18.10% annual volatility. This represents a weighted average of the return expectations for Large/Mid Cap US Equity and Small Cap US Equity, and it includes the impact of correlations in calculating volatility. This is consistent with historical observations, which reveal a slight return premium of Broad US Equities over Large/Mid Cap with a slight increase in volatility due to inclusion of small cap stocks. **Figure 43** shows the Annual Real Return of the Russell 3000 Index since 1979, and **Figure 44** shows the rolling 5-Year standard deviation of returns for the index over the same time frame.

Figure 43: Russell 3000 Annual Real Return



Source: Russell Investments. (2010).

Figure 44: Rolling 5-Year Russell 3000 Standard Deviation



Source: Russell Investments. (2010).

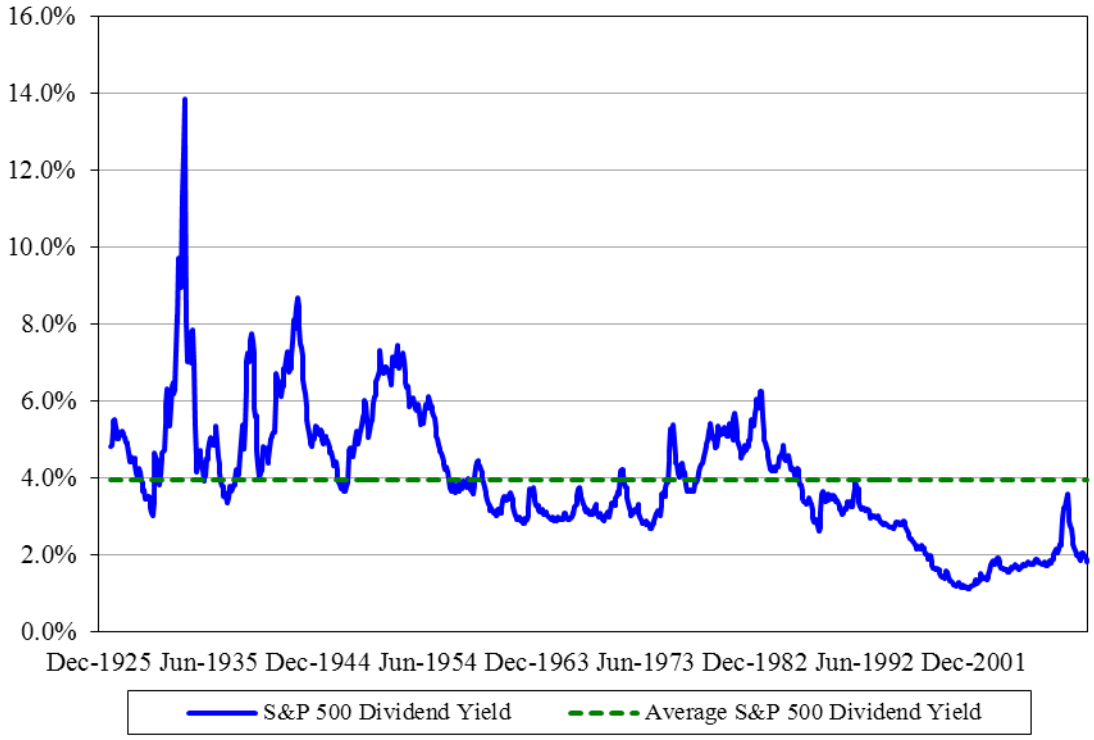
Returns Decomposition Factor Set and Background

Factor #1: Dividend Yield

For this analysis, RVK used the current dividend yield on the S&P 500 Index of 1.83%. The current dividend yield avoids the need to forecast changes in dividend policy, and provides a conservative estimate of return contribution using dividend yields that resemble those actually realized by our clients. **Figure 45** shows historical annual dividend yields for the S&P 500 Index over various trailing periods.

It is reasonable to suggest that stocks may revert to a higher dividend yield in the future via a higher return premium or increased dividend payout policy. Therefore, annual reevaluations of our model may result in modifications.

Figure 45: Historical S&P 500 Dividend Yield
12-Month Trailing Dividend Yield



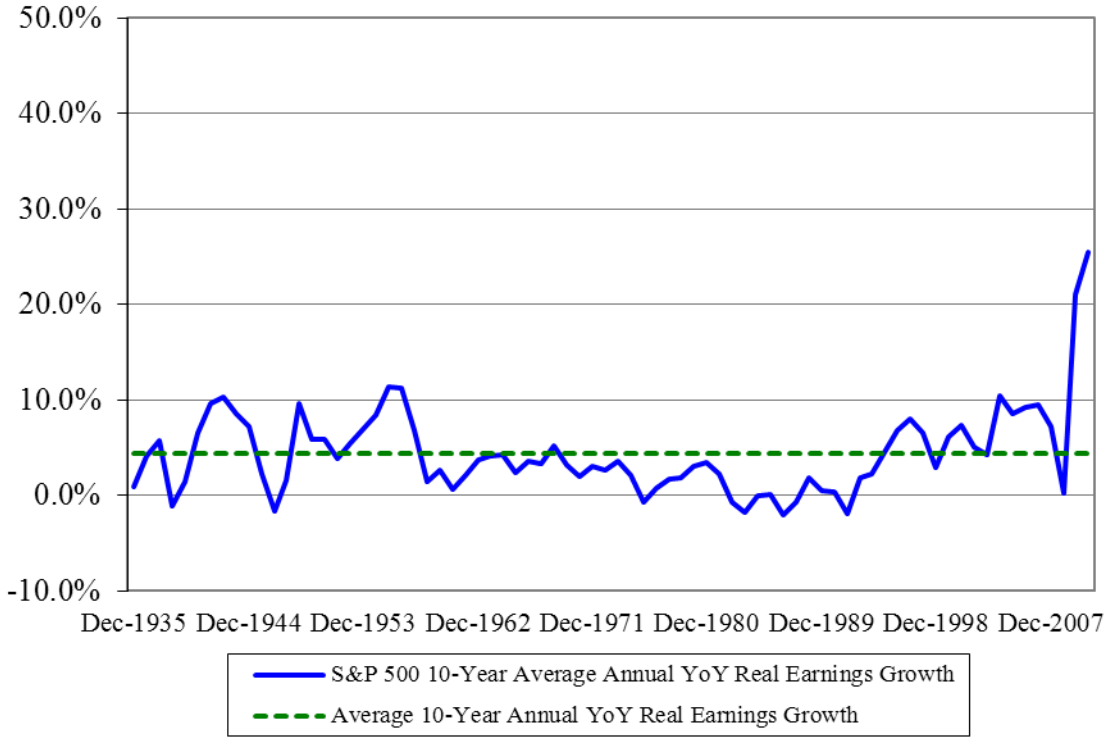
Sources: Standard & Poor's. (2010); Shiller, R.J., "Irrational Exuberance." *Princeton University Press*. (2010)

Factor #2: Real Earnings Growth

From 2008 to 2010, S&P 500 Index real earnings growth experienced volatility that exceeded any other period in its 85-year history. Our approach of using the long-term average of rolling 10-year, year-over-year earnings growth averages of 4.45% assumes that over long periods of time the growth rate will resemble historical averages. The long-term earnings growth average reflects a slightly higher growth rate as compared to the expected real GDP growth for the US economy of approximately 3%. While corporate profit margins contract and expand over short periods of time, in the long term, corporate earnings should track GDP growth closely. We also noted that other analysts at the Congressional Budget Office and J.P. Morgan are forecasting average annual real GDP growth over the next 10 years of 2.96% and 2.50%, respectively.

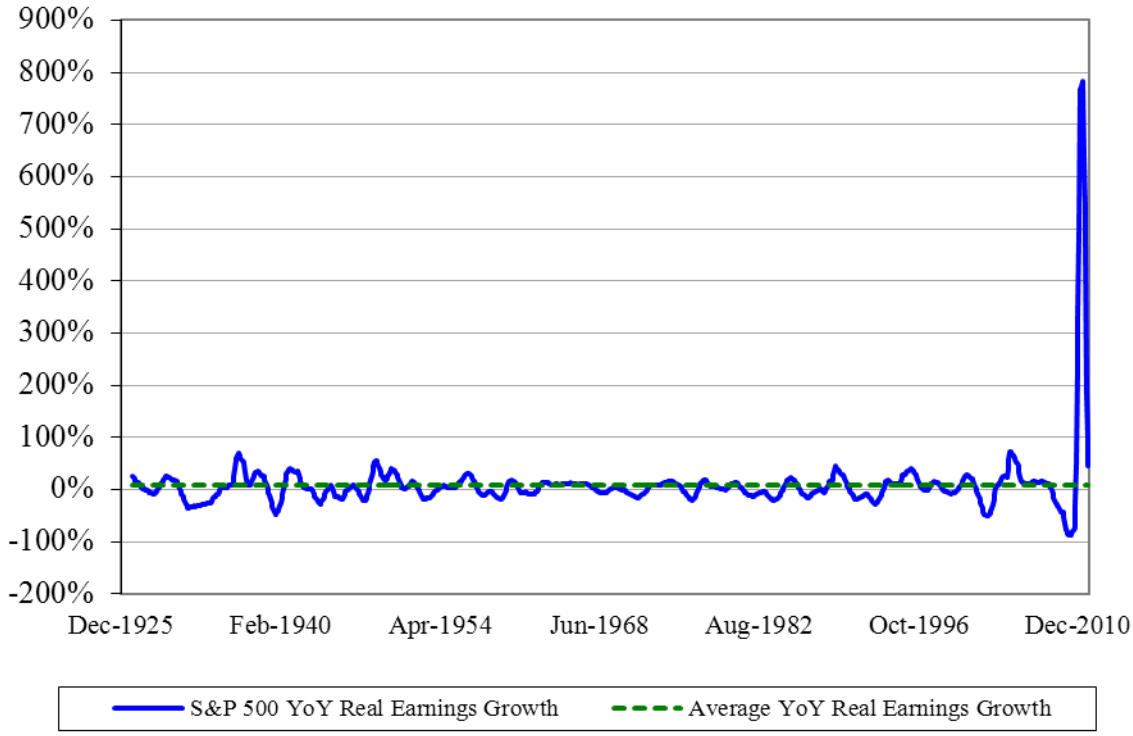
Figure 46 shows the 85-year average of the rolling 10-year average of annual Y/Y earnings growth rates. **Figure 47** shows average year over year real earnings growth from 1926 – 2010.

Figure 46: Historical S&P 500 10-Year Average Annual YoY Real Earnings Growth Reported Earnings for the Trailing 12 Months



Sources: Standard & Poor's. (2010); Bureau of Labor Statistics. (2010); Shiller, R.J., "Irrational Exuberance." *Princeton University Press*. (2010)

Figure 47: Historical S&P 500 YoY Real Earnings Growth
Reported Earnings for the Trailing 12 Months



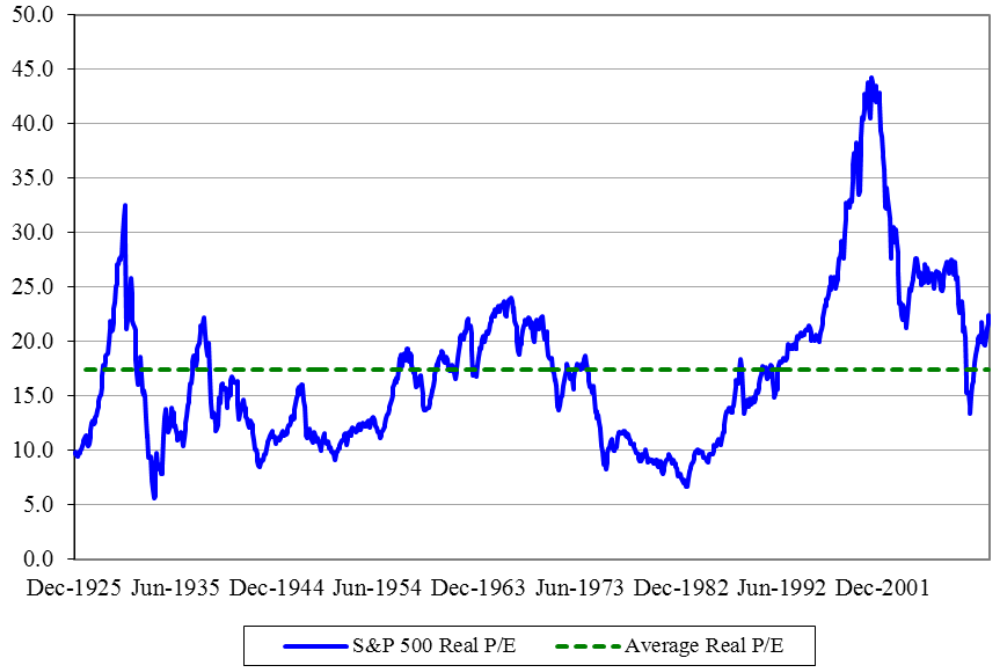
Sources: Standard & Poor's. (2010); Bureau of Labor Statistics. (2010); Shiller, R.J., "Irrational Exuberance." *Princeton University Press*. (2010)

Factor #3: Changes to P/E Ratio

We use the Shiller P/E10 model to estimate the contribution of valuations to returns. Similar to earnings, the P/E ratio of the S&P 500 Index experienced extreme volatility over the past two years. The trailing 12-month S&P 500 Index P/E ratio as of December 31, 2010 was 16.65, which was close to the 85-year average of 17.39.

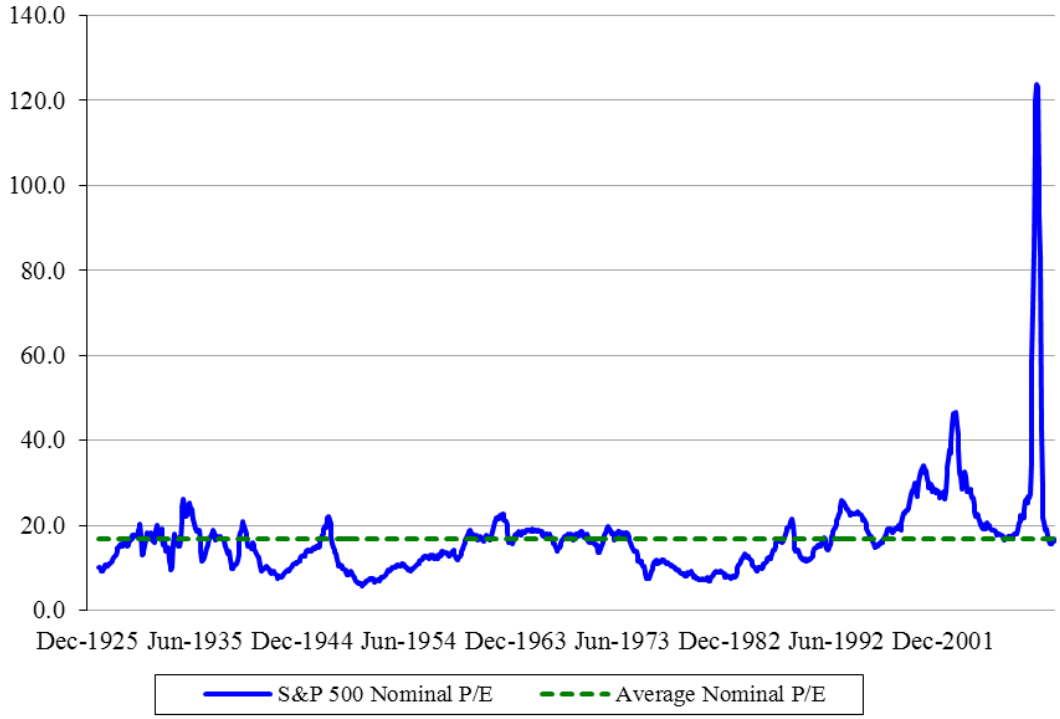
Assuming that the current P/E10 ratio of 22.43 reverts to the 85-year average of 17.39, valuation will have a negative impact on returns. Specifically, the contribution of valuation suggested by mean reversion is -2.25% per year.

Figure 48: Historical S&P 500 Real Price/Earnings Ratio
10-Year Average Earnings Used for P/E



Sources: Standard & Poor's. (2010); Bureau of Labor Statistics. (2010); Shiller, R.J., "Irrational Exuberance." *Princeton University Press*. (2010)

Figure 49: Historical S&P 500 Nominal Price/Earnings Ratio
Reported Earnings for the Trailing 12 Months



Sources: Standard & Poor's. (2010); Shiller, R.J., "Irrational Exuberance." *Princeton University Press*. (2010)

INTERNATIONAL EQUITY ASSUMPTIONS

Summary

We used data as of December 31, 2010 to provide the baseline for our assumptions and to inform the direction and magnitude of change from the previous year's assumptions.

Our analysis begins by modeling risk and return characteristics of Developed Large/Mid Cap International Equities using the MSCI EAFE Index and MSCI World ex-US Index. We selected these indices due to the extensiveness of the historical record and similarities to a Developed Large/Mid Cap International Equity portfolio with regard to sector, capitalization, and geographic exposure. It is important to note, however, that these indices extend back only 41 years, as opposed to 85 years for the S&P 500 Index. Therefore, there is a larger degree of uncertainty in the estimates.

We primarily relied on historical data to estimate forward looking return and risk expectations for Developed Large/Mid Cap International Equities. Sub-asset classes, including Small/Mid Cap International and Emerging Market Equities, were then estimated based on historical return premiums over Developed Large/Mid Cap International Equities. In addition, we refined our final estimates by considering the potential impact of mean reversion, as well as the emergence of new trends, such as increased market integration and currency adjustments. While we employed a decomposition model for International Equities, the results were only used as a single data point, as the index history was limited.

Our 2011 assumptions for our International Equity sub-asset classes are listed in the figure below. In addition, detailed results for each sub-asset class are presented on the following pages.

Figure 50: International Equity Asset Class Assumptions

Asset Class	2010			2011			Variance		
	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %
Dev'd Large/Mid Cap Int'l	8.25	18.50	6.70	8.00	18.75	6.41	-0.25	+0.25	-0.29
Dev'd Small/Mid Cap Int'l	9.25	22.50	7.00	8.75	22.75	6.45	-0.50	+0.25	-0.56
Emerging Markets	10.50	28.00	7.11	10.50	28.50	7.00	0.00	+0.50	-0.12
Broad Int'l	8.60	19.15	6.95	8.65	20.10	6.84	+0.05	+0.95	-0.11
Global Equities	8.32	17.10	6.99	8.45	17.85	7.01	+0.13	+0.75	+0.02

Developed Large/Mid Cap International Equities

International Developed Large/Mid Cap Equities were modeled using both the MSCI EAFE Index and the MSCI World ex US Index since inception in 1970.

Average Historical Real Return Premium

The primary source of our real return forecast was historical return data for the MSCI EAFE Index and MSCI World ex-US Index relative to the S&P 500 Index. As shown below, the average arithmetic annual real return since inception for the MSCI EAFE Index was 8.37%, while the average arithmetic real return for the MSCI World ex-US Index was 8.34%. During the past 41 years, the average annual nominal premium over the S&P 500 Index was 0.96% for the MSCI EAFE Index and 0.94% for the MSCI World-

ex US Index. The figure below shows the rolling 5-year excess return for the two MSCI indices versus the return for the S&P 500 Index.

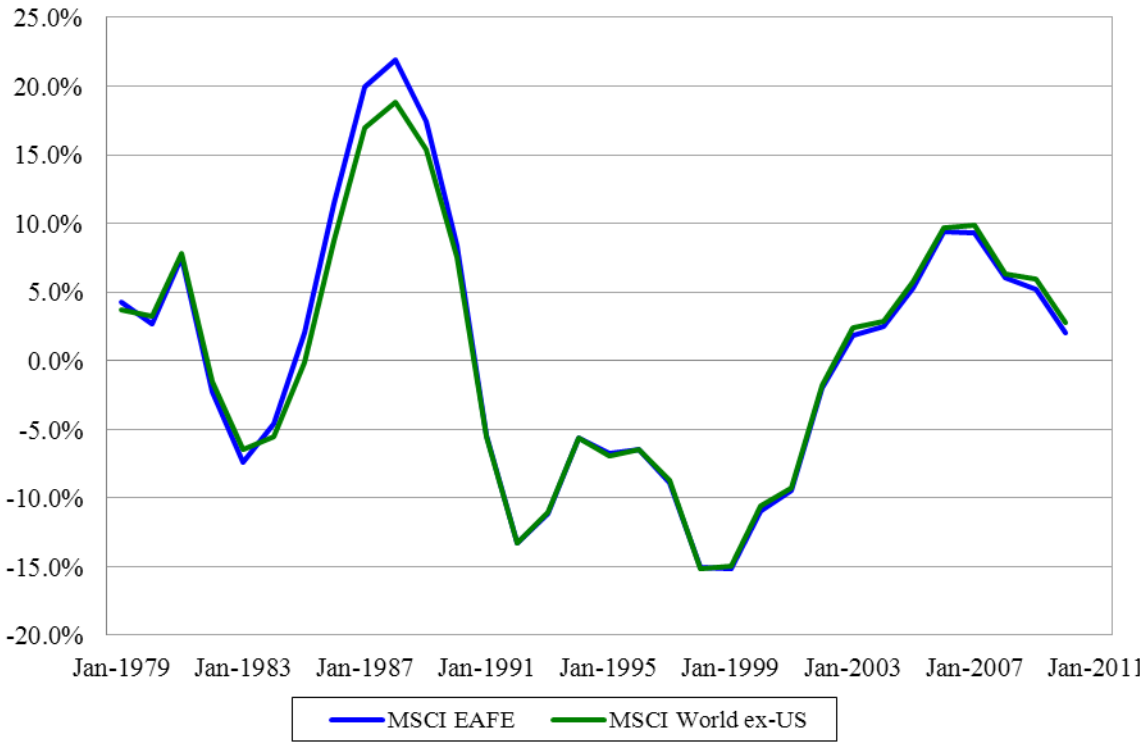
Figure 51: MSCI EAFE & MSCI World ex-US Index

Average Annual Real Returns

Trailing Period	Average Real Return MSCI EAFE	Average Real Return MSCI World ex-US	Average Real Return S&P 500
Since Inception (40 Years)	8.37%	8.34%	7.44%
30 Years	9.18%	8.92%	9.16%
20 Years	6.14%	6.49%	8.69%
10 Years	4.96%	5.53%	1.39%

Sources: MSCI Barra. (2010); Standard & Poor's. (2010); US Department of Commerce - Bureau of Economic Analysis. (2010)

Figure 52: International Equity Return Premium
5-Year Rolling Excess Return vs. S&P 500



Source: MSCI Barra. (2010).

Mean Reversion

In addition to evaluating the return premium versus the S&P 500 Index, we performed a mean reversion analysis to assess the potential impact on future returns for the MSCI indices. The figure below shows the required real return over the next ten years based on 20, 30, and 40 year historical time periods for both the MSCI EAFE Index and MSCI World ex-US Index (based on arithmetic real returns).

Figure 53: Mean Reversion of International Equity Returns

		20-Year Period		30-Year Period		40-Year Period	
	Return since 1970	Last 10 Years	Return over Next 10 Years	Last 20 Years	Return over Next 10 Years	Last 30 Years	Return over Next 10 Years
MSCI EAFE	8.37%	4.96%	**11.89%**	6.14%	**12.97%**	9.18%	**5.97%**
MSCI World Ex-US	8.34%	5.53%	**11.23%**	6.49%	**12.15%**	8.92%	**6.63%**

Sources: MSCI Barra. (2010); US Department of Commerce - Bureau of Economic Analysis. (2010).

The results of this analysis are somewhat inconclusive, as the impact on future returns may be positive or negative depending on the time period of analysis. For example, our 10-year forecast would be higher if only the trailing 10-year period is taken into account, but lower if the trailing 30-year period is taken into account.

Return Decomposition

Due to limited history for international equity data, the decomposition informed, but did not constitute the foundation of our analysis. Given the limited history of the indices, our methodology also differed slightly. Specifically, we used the 85-year mean P/E10 ratio of the S&P 500 Index as a measure of normal valuation. The 16-year history of the MSCI international indices is too limited to provide a reliable estimate of valuation normalcy.

The result of our International Equity analysis is a 10-year real return estimate of 2.48% as of December 31, 2010.

$\frac{D}{P}$ = 2.93% (trailing 12-Month dividend yield as of 12/31/10)

g = 1.23% (16-year average of rolling 10-year average of annual Y/Y earnings growth rate)

$\Delta\left(\frac{P}{E}\right)$ = -1.68% (change in current EAFE P/E 10-year to historical US 85-year average)

$\hat{R}_i$ = 2.48% (expected 10-year average real return)

This real output would then be added to the inflation estimate of 2.50% for a nominal expected return of 4.98%.

Final Assumption

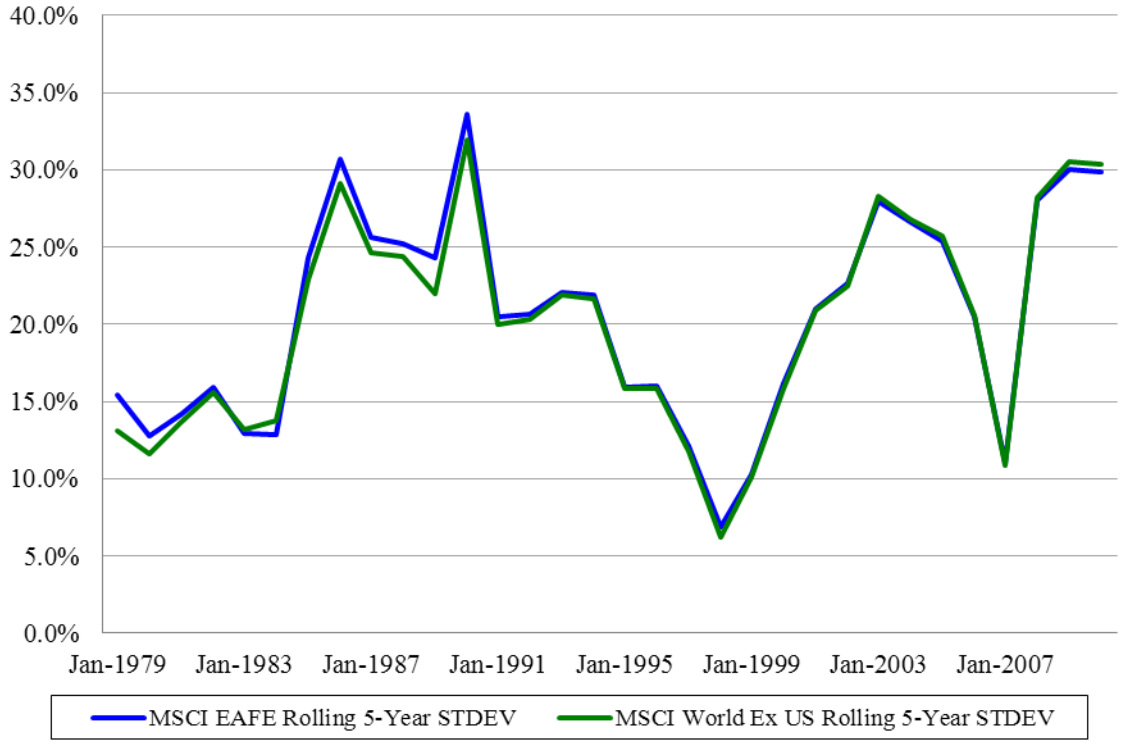
Given the limited history of the MSCI indices, estimation is particularly challenging for this asset class. In creating our 2011 estimate, we placed particular emphasis on the historical premium of Developed Large/Mid Cap International Equity versus US Equity (represented by the S&P 500 Index). The

historical results over the most recent 20- and 30-year periods suggest the elimination of an international equity premium. We also considered qualitative observations which suggest the absence of an international equity return premium; factors include increased market integration and increased demand for international equities due to broader consideration of International Equities as an essential allocation in a diversified portfolio. Although not weighed as heavily, the return decomposition results also suggest the absence of an international equity premium. Taking all of these factors into account, we estimate the real return for Developed Large/Mid Cap International Equities to be 5.50% over the next 10 years, which is equivalent to our US Equity expectation. The resulting nominal expected return is 8.00%, which is a decrease of 25 basis points relative to the 2010 assumption.

Volatility

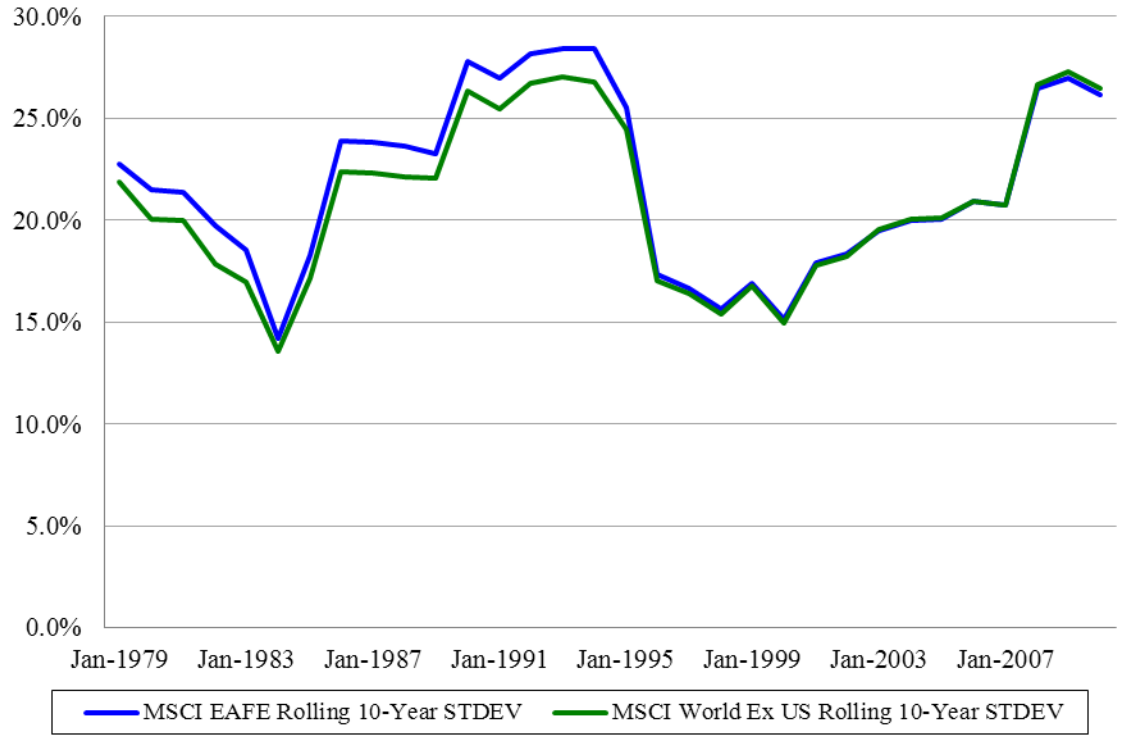
The historical volatility of both the MSCI EAFE Index and MSCI World ex US Index is greater than the historical volatility of the S&P 500 Index. Since inception in 1970, the annual standard deviation of the MSCI EAFE Index and MSCI World ex US Index was 22.84% and 22.20%, respectively. Over the past twenty years, volatility for these indices decreased slightly to 20.83% and 20.97%, respectively. Given the impact of the volatility spike in 2008 and 2009 and the long term trend of declining volatility for these indices, we expect future volatility to fall below the 20-year and 40-year estimates. Thus, our 2011 volatility assumption for Developed Large/Mid Cap International Equities is 18.75%, which is 25 basis points higher than 2010.

Figure 54: Rolling 5-Year Standard Deviation



Source: MSCI Barra. (2010).

Figure 55: Rolling 10-Year Standard Deviation



Source: MSCI Barra. (2010).

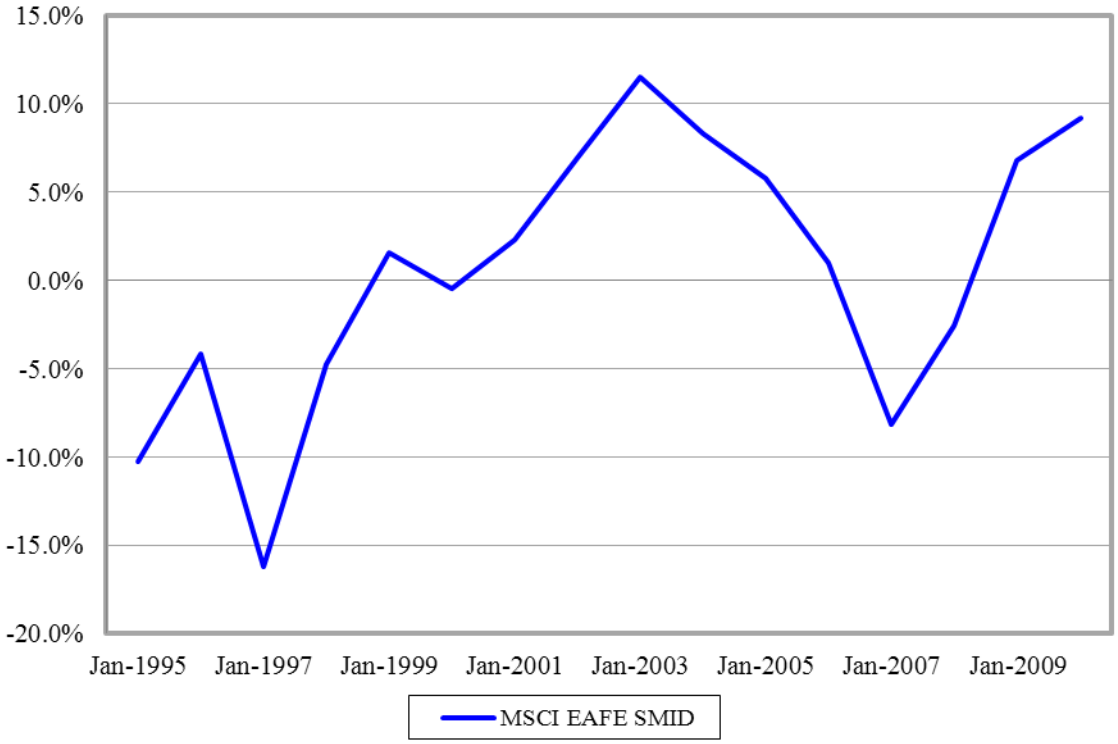
Developed Small/Mid Cap International Equities

The reference series history for International Small/Mid Cap Equities is limited. However, we continue to evaluate potential returns in this sub-asset class, as we continue to believe it presents an attractive opportunity. International Small/Mid-Cap Equities are modeled with the MSCI EAFE Small/Mid Cap Index, which was incepted in 1995.

Average Historical Real Return Premium

Historically, the MSCI EAFE Small/Mid Cap Index has experienced a premium over the MSCI EAFE Index. Over the past 10 years, this nominal premium averaged 4.10%; however, the annual premium since inception averaged 0.42%. **Figure 56** shows the annual premium of the MSCI EAFE Small/Mid Cap Index over the MSCI EAFE Index since 1995.

Figure 56: Small Cap Nominal Premium
1-Year Rolling 1-Year Excess Return vs. MSCI EAFE Index



Source: MSCI Barra. (2010).

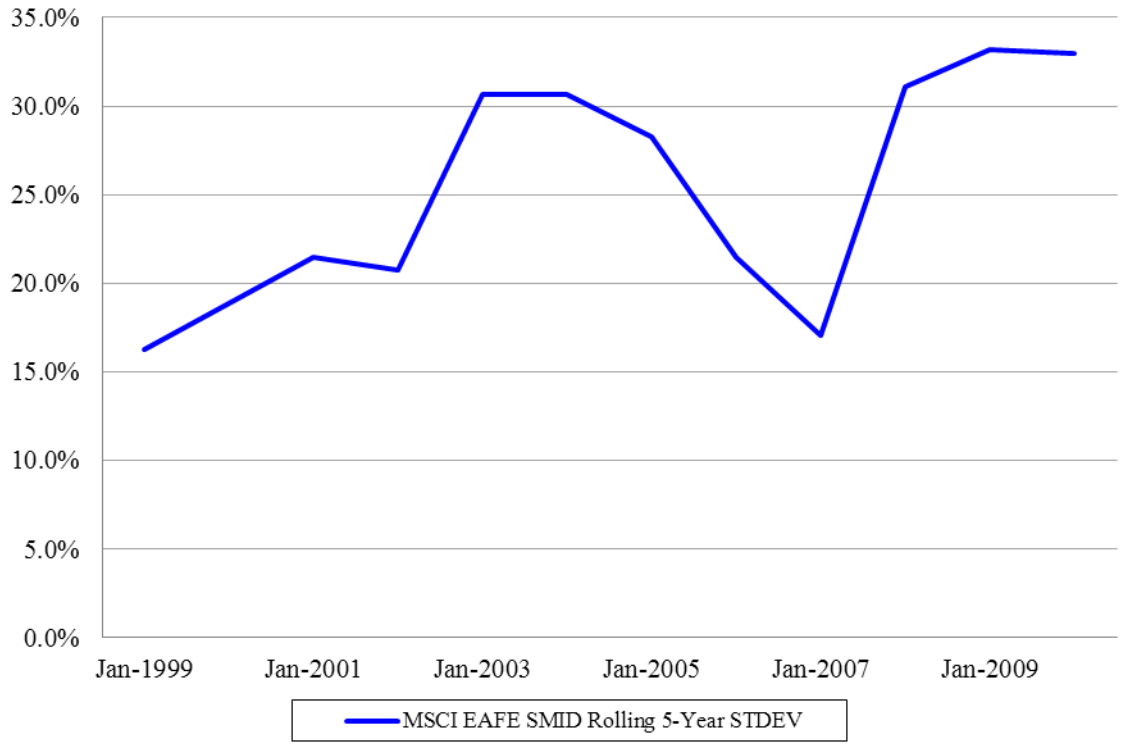
Final Assumption

Given the increased integration of international and US markets, we believe the Small/Mid Cap Premium will more closely resemble that of US Equities. Therefore, we forecast a 0.75% return premium over International Large/Mid Cap Equities, which is in line with the premium applied to US Small/Mid Cap Equities. Accordingly, we assume an expected forward-looking return to Developed Small/Mid Cap International Equity of 8.75%, representing a real return expectation of 6.25% and a 50 basis point decline relative to the 2010 assumption.

Volatility

The MSCI Small/Mid Cap Index has experienced greater volatility than the MSCI EAFE Index. Volatility for the last 10 years has averaged 29.13%, while volatility since inception (16 years) has averaged 24.93%. **Figure 57** shows the rolling 5-year standard deviation of returns for the MSCI Small/Mid Cap Index since inception. Given the limited history of the index, we again tempered our estimate by considering the longer term experience of US Small Cap Indices. Our expected standard deviation of returns for International Small/Mid Cap Equities is 22.75%, which is 1.00% greater than US Small Cap Stocks and 25 basis points higher than our 2010 estimate.

Figure 57: Rolling 5-Year Volatility for the MSCI Small/Mid Cap Index



Source: MSCI Barra. (2010).

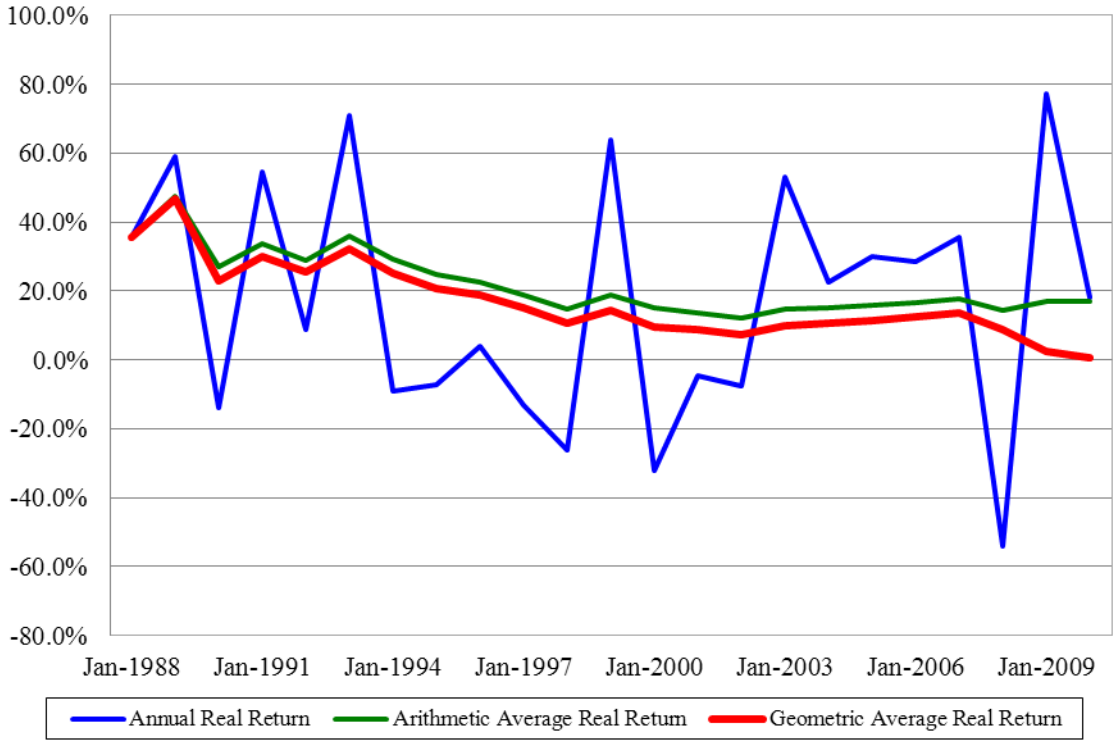
Emerging Market Equities

The reference series for Emerging Market Equities is the MSCI Emerging Markets Index, which was incepted in 1988. Despite its limited history, we continue to evaluate potential returns in this sub-asset class, as we believe it presents an attractive, long-term opportunity.

Average Historical Real Return Premium

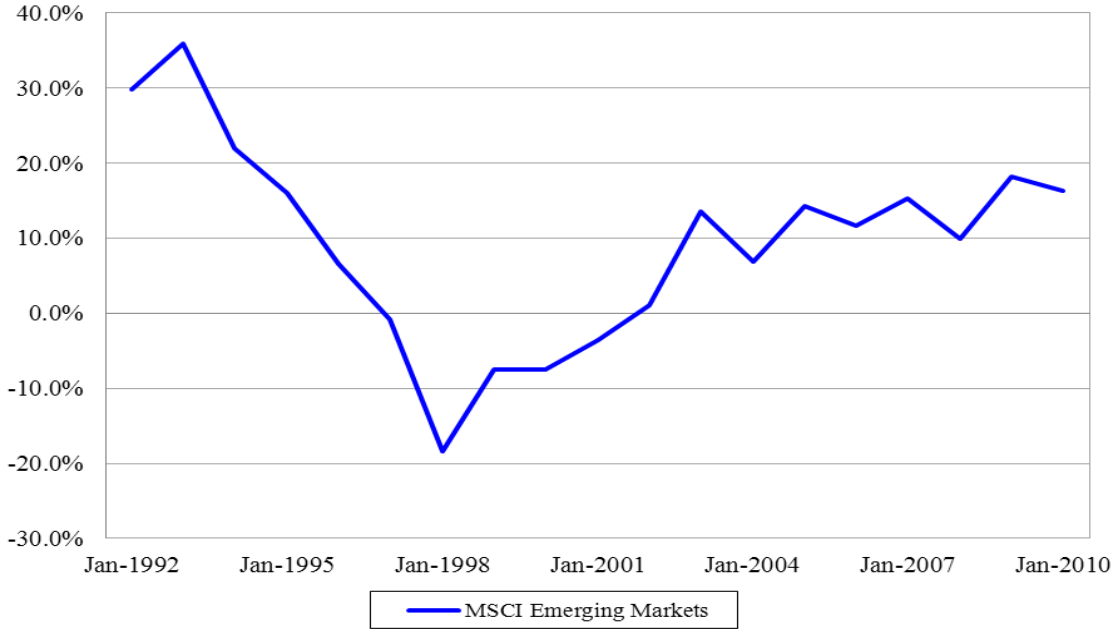
As shown in the chart below, the average arithmetic annual real return for the MSCI Emerging Markets Index has been 17.16%. The average real return premium experienced by the MSCI Emerging Markets Index over the MSCI EAFE Index has been 11.94% since 1988. **Figure 58** shows rolling 1-year returns, arithmetic average returns, and geometric average returns since inception for the MSCI Emerging Markets Index. **Figure 59** shows 5-year rolling returns of the MSCI Emerging Markets Index versus the MSCI EAFE Index.

Figure 58: MSCI Emerging Markets Rolling Annual Return



Sources: MSCI Barra. (2010); US Department of Commerce - Bureau of Economic Analysis (2010).

Figure 59: Emerging Markets Nominal Premium
1-Year Rolling 5-Year Excess Return vs. MSCI EAFE Index



Source: MSCI Barra. (2010).

Mean Reversion

In addition to evaluating the return premium versus the MSCI EAFE Index, we conducted a mean reversion analysis for this index. However, given the limited time period of analysis, the results must be viewed with caution. The figure below shows the required real return over various time periods to enable the index to revert to its return since inception. The results of this analysis suggest strong future return expectations.

Figure 60: Mean Reversion of MSCI Emerging Markets Index Returns

		15-Year Period		20-Year Period		25-Year Period	
	Return since 1988	Last 5 Years	Return over Next 10 Years	Last 10 Years	Return over Next 10 Years	Last 15 Years	Return over Next 10 Years
MSCI Emg Mkts	17.16%	21.13%	**15.23%**	19.93%	**14.47%**	13.06%	**23.60%**

Sources: MSCI Barra. (2010); US Department of Commerce - Bureau of Economic Analysis (2010).

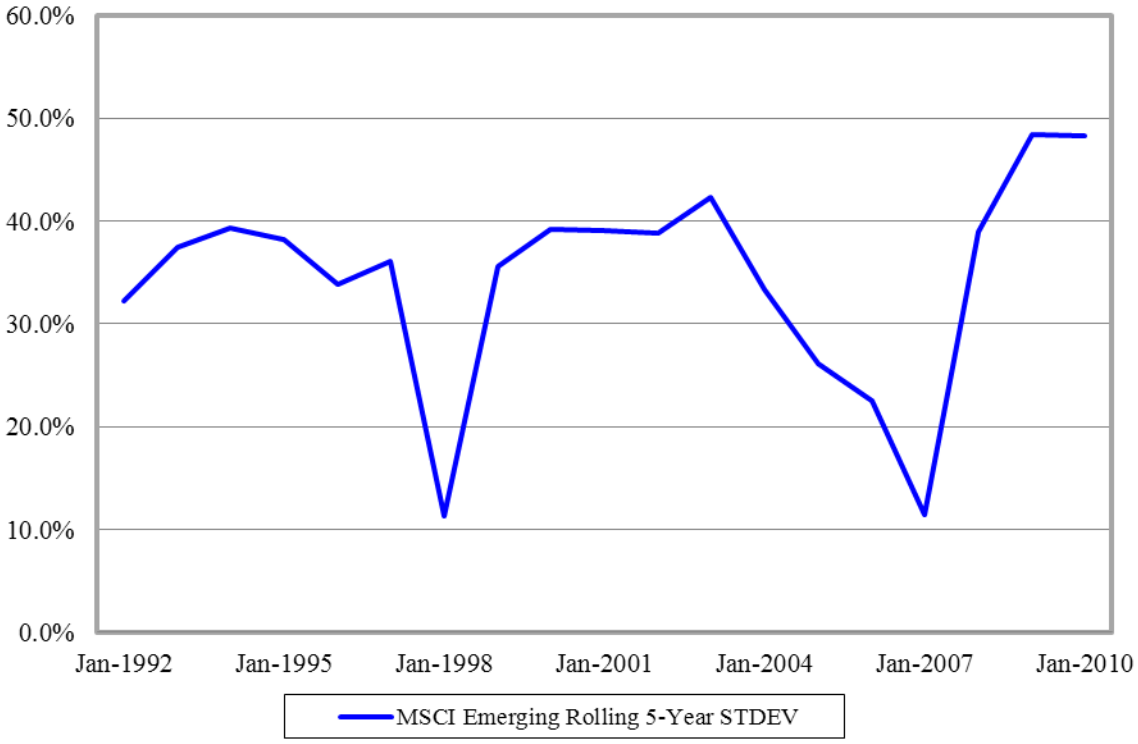
Final Assumption

Modeling Emerging Market Equities is particularly challenging given the relatively limited historical data. While the data suggests a substantial premium over all other equity asset classes, RVK assumes a more constrained return premium that is more in line with more mature international equity sub asset classes than past data would suggest. Based on the above analysis and our survey of the market, we expect a 250 basis point premium of Emerging Markets over International Developed Large/Mid Cap Equities. This translates to a 10.50% nominal expected return, which is identical to the 2010 assumption.

Volatility

Emerging Markets are one of the most volatile asset classes, particularly over the past several years. The standard deviation of returns for the MSCI Emerging Markets Index has been 36.63% since inception and 36.61% over the last 10 years. **Figure 61** shows the rolling 5-year standard deviations of returns for the MSCI Emerging Markets Index since inception. Our forward-looking volatility expectations are lower than historical data would suggest, as we believe Emerging Market Equities will more closely resemble more mature International Equities in the future. Despite having a lower estimate than historical experience, we estimate Emerging Markets volatility to be much greater than all other equities, with an expected standard deviation of 28.50%, which is 50 basis points higher than our 2010 estimate.

Figure 61: Rolling 5-Year Volatility for the MSCI Emerging Markets Index



Source: MSCI Barra. (2010).

Broad International Equities

International Equity for the broad market can be represented by the MSCI All Country World Index ex-US IMI Series. Market capitalization statistics suggest that this index is dominated by the performance of developed country securities (accounting for approximately 76.0% of the total capitalization), with the remaining allocated to emerging markets. Using a weighted average methodology of current market capitalizations of Developed Large/Mid Cap International Equities (66.5%), Developed Small/Mid Cap International Equities (9.5%), and Emerging Markets (24.0%), we accordingly estimate that Broad International Equity exposure will experience an annual return of 8.65%. The expected annual volatility, which includes the correlation between Developed Large/Mid Cap International Equities, Developed Small/Mid Cap International Equities, and Emerging Markets, is 20.10% and is 95 basis points higher than our 2010 assumptions.

Global Equities

Global Equity can be represented by the MSCI All Country World Index IMI Series. Market capitalization statistics for this index reveal a balanced allocation between domestic (accounting for approximately 45.0% of the total capitalization) and foreign securities. Using a weighted average of current market capitalizations between our Broad US Equity (45.0%) assumption and Broad International Equities (55.0%) assumption, we accordingly estimate that Global Equity exposure will experience an annual return of 8.45% with a 17.85% annual volatility.

REAL ESTATE, ABSOLUTE RETURN, AND PRIVATE EQUITY

Real Estate Summary

Our 2011 assumptions separate real estate assumptions into three categories: Core Real Estate, Non-Core Real Estate, and REITS. This methodology is slightly different than prior years where we broke out Non-Core Real Estate into values-added and opportunistic. While we do not dismiss the differences between value-added and opportunistic funds, we believe there is sufficient overlap to justify consolidation under a single sub-asset class. Our assumptions for 2011 differed most in our assumed volatility, which in turn lowered expected compounded returns. Heightened volatility expectations resulted both from increased observed volatility (particularly in the case of REITs), as well as adjustments to account for the tendency of volatility smoothing that results from appraisal frequency and methodology.

Figure 62: Real Estate Assumptions

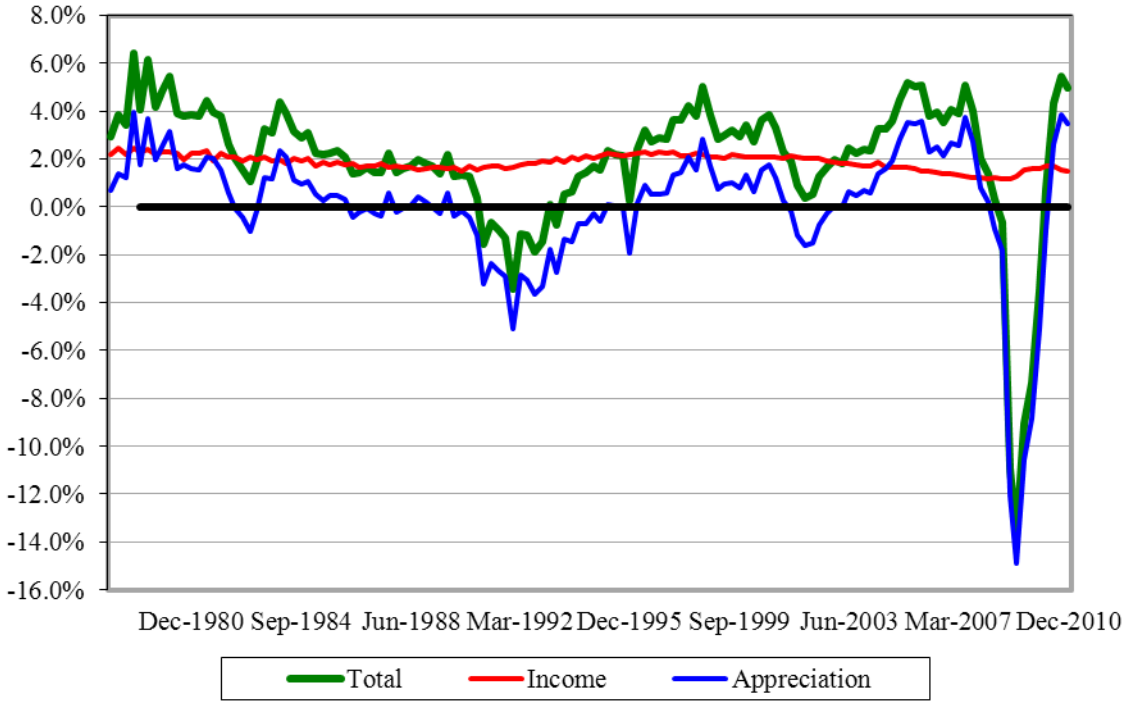
Asset Class	2010			2011			One Year Adjustment		
	Nominal Return (Arithmetic) %	Risk (Standard Deviation) %	Nominal Return (Compound) %	Nominal Return (Arithmetic) %	Risk (Standard Deviation) %	Nominal Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %
Core Real Estate	7.00	10.50	6.49	7.00	12.50	6.28	0.00	+2.00	-0.21
Non-Core Real Estate				10.00	21.50	7.96			
REITS	7.50	16.50	6.26	7.25	18.00	5.77	-0.25	+1.50	-0.48

Stated returns in private equity real estate vehicles fell dramatically in 2009, followed by an improvement in the second half of 2010. This is due to the appraisal-based valuations that are employed for this asset class, as fund managers typically appraise their assets on a quarterly or less frequent basis. In fact, for some value-added and opportunistic real estate funds, no external appraisals are conducted. Instead, managers rely upon their internal valuations, which tend to significantly lag market prices. The recovery of pricing within these vehicles over the past year leads us to slightly reduce our core real estate and non-core real estate assumptions (non-core real estate consists of the formerly distinct value-added and opportunistic real estate categories).

Core Real Estate

Core real estate fundamentals stabilized and gradually improved in 2010. Conversely, yield seeking investors, aided by readily available and inexpensive financing, have driven cap rates swiftly lower resulting in substantial price appreciation in 2010. However, given that core real estate pricing is influenced by interest rates available from competing fixed-income securities, there is remaining risk that a pronounced increase in interest rates would drive up the cap rates for core real estate assets from their current levels. **Figure 63** shows quarterly returns of the NCREIF Open-Ended Core Equity Index ("NCREIF ODCE Index") since inception and illustrates the large variations in the appreciation component of real estate compared to income:

Figure 63: NCREF ODCE Quarterly Returns



Source: NCREIF, as of December 31, 2010.

With regard to capital flows, in 2010, exit queues that had formed during the economic downturn quickly dissipated, and entry queues formed as risk-averse investors rescinded their redemption requests and sought greater exposure to core real estate assets. Potential remains for increasing demand to push yields lower and prices higher. Since 1978, the vast majority of returns in core real estate have come from income rather than from capital appreciation. During the recent 2003-2007 boom period, this flipped to where capital appreciation provided the majority of returns. We anticipate the historical trend to reassert itself, with moderate capital appreciation over the next 5-10 years compared to income. Given stabilizing fundamentals and aforementioned dynamics, we are maintaining our core real estate return assumption at 7.00% and increasing the volatility estimate by 200 basis points to 12.50%. The significant increase in our standard deviation assumption is necessary to better reflect the historically understated volatility of the NCREIF ODCE Index caused by appraisal based "smoothing" methodology.

Non-Core Real Estate

While Non-Core Real Estate (i.e., value-added and opportunistic) faces similar opportunities and challenges as those faced by Core Real Estate and REITs, Non-Core Real Estate funds are inherently more flexible in their approaches. Historically, a significant portion of value-added and opportunistic private equity real estate returns stem from appreciation rather than from income. During the 2003-2007 boom period, returns in value-added and opportunistic private equity real estate were enhanced by loose credit standards available on inexpensive terms in tandem with strengthening fundamentals. Many of these strategies employ sales of properties to core real estate funds and public REITs; these exit strategies could once again prove viable over the near to medium-term. Additionally, competition and transparency has increased in Non-Core Real Estate, which we believe will partially reduce asset management and incentive compensation, thereby increasing net returns to investors. The average vintage 2005-2007 non-core funds have experienced significant losses, given weaker than expected operating performance (rents,

occupancy, etc.) compounded by high degrees of leverage. However, vintage 2010 and 2011 non-core vehicles are expected to benefit from lower asset pricing, especially for operationally or capital-stressed deals. Our new non-core subsector assumptions were derived by weighting the former separate assumptions for the value-added and opportunistic subsectors, 70% and 30% respectively, in a manner reflective of the opportunities available and the weighting of capital deployed across these sectors. Considering the aforementioned dynamics, we place Non-Core Real Estate returns and standard deviation assumptions at 10.00% and 21.50%, respectively.

Real Estate Securities – REITS

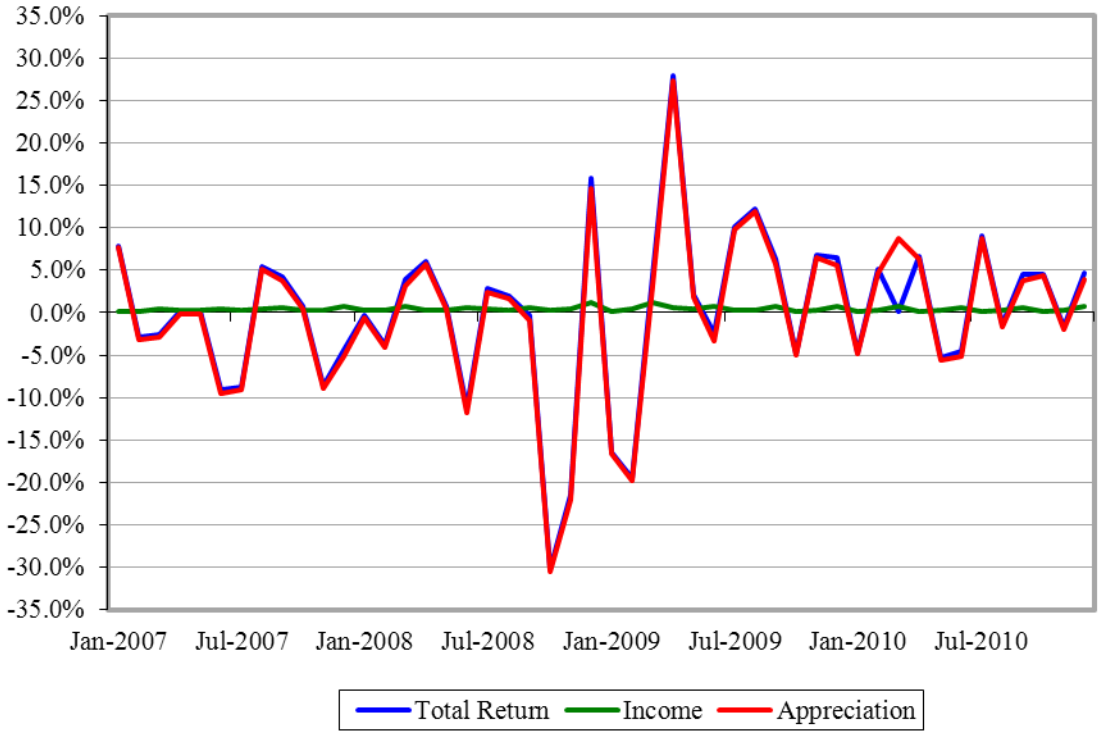
The REIT market has experienced tremendous volatility over the past two years. The following chart shows Green Street Advisors' assessment of the net asset value ("NAV") of US public real estate securities ("US REITs") compared to their trading price. During the height of the global economic crisis in March 2009, Green Street estimated that REITs were trading at a greater than a 40% discount to NAV. By summer 2010, this had changed dramatically, with REITs trading at a near 25% premium to NAV. While REITs rarely trade exactly at NAV, they have held an average premium to NAV since 1990 of 2.0%.

Figure 64: US REITs Net Asset Values

Source: Green Street Advisors, as of November 2010.

Public real estate investment pricing has rebounded substantially over the past two years. While we recognize that publicly-traded securities typically move earlier than their private real estate counterparts (both positively and negatively), we are concerned with the historically high premium to NAV and that much of the improvement in these securities' underlying property fundamentals is already priced in.

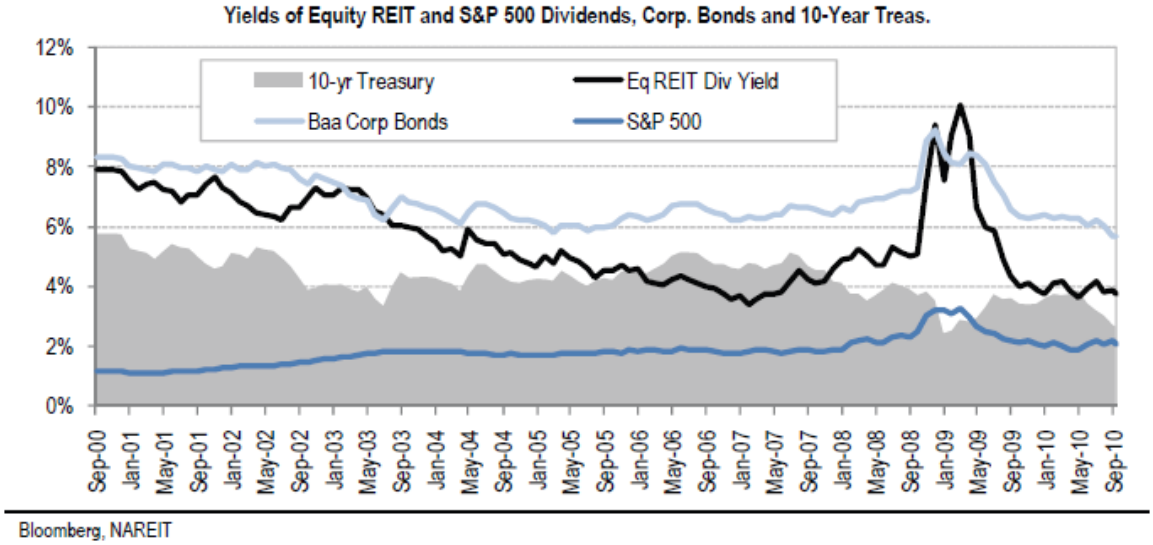
Figure 65: NAREIT Performance
(2007-2010)



Source: NAREIT.

As demonstrated in **Figure 65**, appreciation returns from REITs are highly volatile and can have a major impact on total returns. The income component is much more stable, although it does vary somewhat from peak to trough. Several factors should be noted with respect to this volatility. First, REITs are relatively thinly-traded, particularly outside of the top 25 securities by market capitalization. In the second half of 2009, we saw a complete reversal of the situation in 2008, where REITs were sold indiscriminately, as investors "fled" from anything real estate-related. In the late 2009 and 2010, "yield-starved" investors returned to publicly-traded real estate, bidding up share prices and driving down yields.

Figure 66: Yields of REIT and S&P 500 Dividends, Corp. Bond, and 10 Year Treasurys



In 1991, 2000, and early 2009, Equity REIT dividend yields had risen significantly from their lows, portending significant returns in REITs over subsequent periods. Given the substantial appreciation in REIT pricing, as well as the higher premium of REITs versus their NAVs, our REIT assumption is decreasing by 0.25% to 7.25%. We are increasing our volatility assumption by 1.50% to 18.00%. The volatility was increased to better triangulate with the volatility assumptions for the equity portfolios.

Absolute Return Strategies

Absolute Return strategies provide a diversified bundle of hedge fund investments, such as long/short equity, global/macro and various arbitrage strategies. RVK advocates significant diversification through multi-manager products in this asset class, as individual strategies can rapidly swing in and out of favor. To dampen cyclicality and diversify return and risk sources, Absolute Return fund of funds allocate among a range of individual strategies through multiple managers. Our expected return and volatility assumptions for Absolute Return strategies are as follows:

Figure 67: Absolute Return Asset Class Assumptions

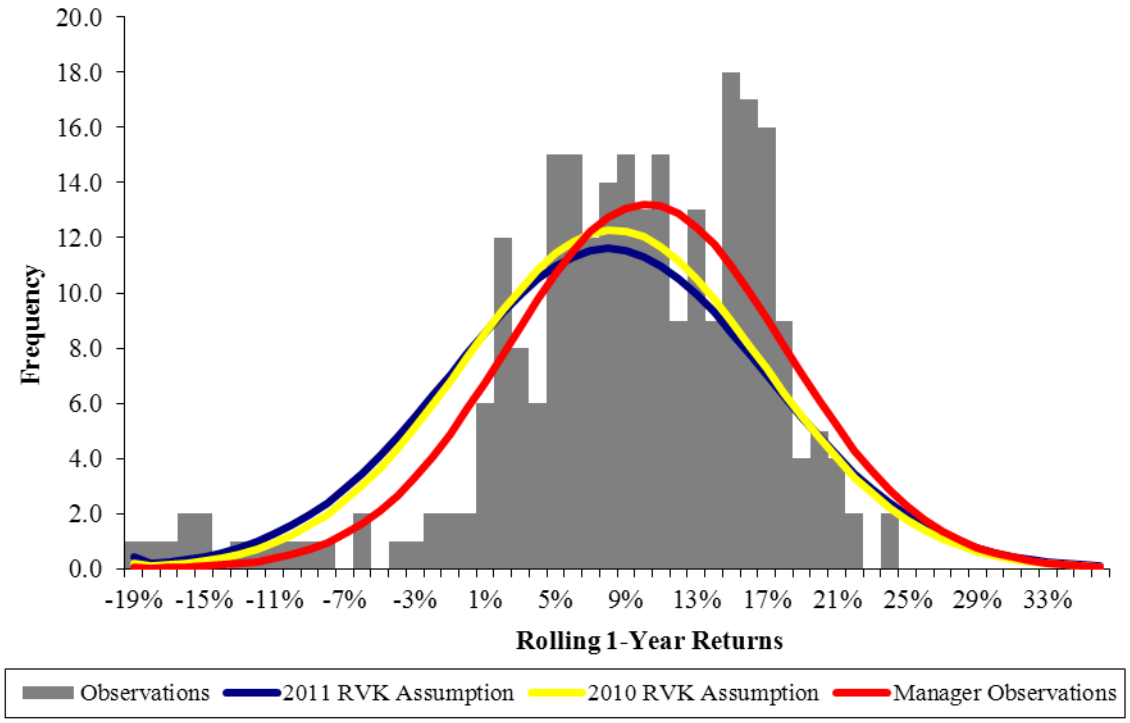
Asset Class	2010			2011			Variance		
	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %
Absolute Return	7.75	8.50	7.42	7.50	9.00	7.13	-0.25	+ 0.50	-0.29

Hedge Fund.Net Fund of Funds Multi-Strategy Index ("HFN FOF Multi-Strat Index") provides return and risk data for a peer group consisting of multi-manager funds pursuing diversified strategies. While an imperfect index—which is a characteristic shared by many manager-reported indices—the index provides a reasonable baseline to benchmark risk and return characteristics of absolute return strategies. As of December 31, 2010, the annual return of the HFN FOF Multi-Strat Index since its inception in 1982 has averaged a 13.44% arithmetic return and 11.24% standard deviation.

Recognizing the benchmarking challenges in this asset class, we pressure-tested the HFN FOF Multi-Strat Index by analyzing a subset of multi-strategy fund-of-funds managers most commonly used by RVK's clients, as well as a broad universe of managers monitored by RVK. Over the long term, investment managers employed by our clients have produced a return premium relative to the HFN FOF Multi-Strat Index, while experiencing lower volatility. However, the actual distribution of rolling 1-year manager returns exhibits a fat left tail (downside risk), and is far from what we would consider to be a normal distribution. If we attempt to fit this set of returns to a normal distribution over the longest time period available for evaluation (1988 – 2010), we estimate a return of 9.65% and standard deviation of 7.90%.

This observation is far less conservative than both our 2010 and 2011 assumption. These differences are illustrated in the histogram on the following page.

Figure 68: ARS Manager Rolling 1-Year Average Performance
(21 Managers: 1988 – 2010)



Our 2010 assumption estimated a lower return and higher risk than historical data would imply. This year, recognizing our lower return and higher risk assumptions for most other asset classes, we have made our Absolute Return assumptions even more conservative. Our 2011 assumption calls for a 7.50% return and 9.00% standard deviation. Our return assumptions this year make the 2008 experience, roughly a 20% decline, more likely than under our 2010 assumptions.

Over the longest time period we can measure with actual managers, the return experience has averaged 9.58%, which is higher than our assumption. We believe in a lower return expectation for several reasons. First, the 9.58% historical return delivered by the asset class is almost certainly inflated by "survivorship bias." Our "asset class proxy" return series construction methodology creates this bias, as managers with the longest return histories comprise more of the return stream. Therefore, it stands to reason that the managers with the longest return series have enjoyed the most successful returns. Second, because of the growing size, crowding, and maturity of the asset class, we believe that it makes sense to expect a lower prospective return than the asset class has historically delivered.

Private Equity

Private Equity is a long-term illiquid investment. Private equity investors demand a return premium relative to public equity investments to compensate them for illiquidity and a perceived higher level of risk. We assume a Private Equity return premium of 4.25% over US Large/Mid Cap Equities and a volatility rate consistent with private equity's position on the capital markets line. Our expected return and volatility assumptions for Private Equity are as follows:

Figure 69: Private Equity Asset Class Assumptions

Asset Class	2010			2011			Variance		
	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %
Private Equity	12.25	29.75	8.50	12.25	30.25	8.38	0.00	+0.50	-0.12

The rationale for these assumptions is based on the following characteristics of the asset class observed in our analysis.

- Over a 28+ year period of quarterly return observations incorporating multiple economic cycles, time-weighted private equity returns have averaged an annualized premium of approximately 4.33% over domestic large cap equities.
- We believe that Private Equity's observed volatility is biased downward by interim valuation methods and does not capture the illiquidity risk inherent in the asset class. Therefore, we favor a higher volatility assumption than what has been observed historically.
- Though current deal pricing remains favorable relative to the rich valuations seen in 2006-2008, a large overhang of committed, but uninvested, capital and improved access to leverage has brought valuations in line with their long-term averages.
- Despite the current capital overhang and improved lending environment, we believe fundraising in the asset class will be more subdued in the future and that a return to more sensible underwriting will continue to require higher equity investments by deal sponsors.

Figures supporting these observations are provided below and on the following pages. The first series of figures relates to historical returns and return premiums, and the second series relates to the investing and lending environment.

Private Equity Return Analysis

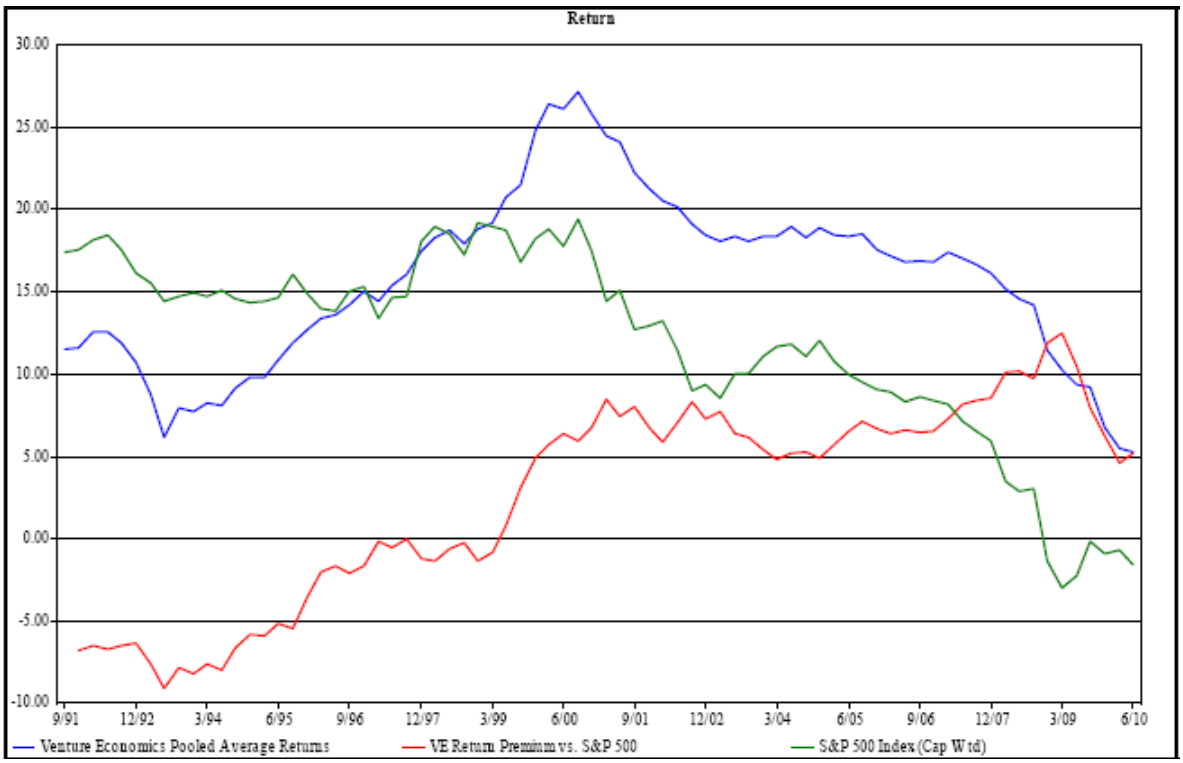
We analyzed a 28+-year period of quarterly, time-weighted private equity returns compared with the S&P 500 Index returns of the same period and discovered that pooled private equity returns have approximately averaged an annualized 433 bps premium. The following figures detail the observed return and volatility measurements.

Figure 70: Return Comparison of Private Equity vs. the S&P 500

	All PE	S&P 500
Annualized Arithmetic Return	17.14	12.81
Annualized Standard Deviation	25.83	19.02

Statistics are calculated using data from 06/30/1983 through 6/30/2010.

Figure 71: 10 Year Rolling Returns
As of June 30, 2010



Source: Venture Economics. S&P.

Our 2011 assumption calls for a 425 bps premium over our arithmetic US Large/Mid Cap Equity return assumption (181 bps on a geometric basis), which is consistent with the historical annual return premium. Though we believe the return premium in Private Equity should hold, we note that our return assumption of 12.25% is conservative relative to the observed returns of 17.14%. In addition, our selected fund-of-funds managers have historically performed above median relative to the index-included funds that have meaningful performance histories. This provides additional confidence that the assumption is conservative, as data shows that historical top performers repeat their success at a very high rate.

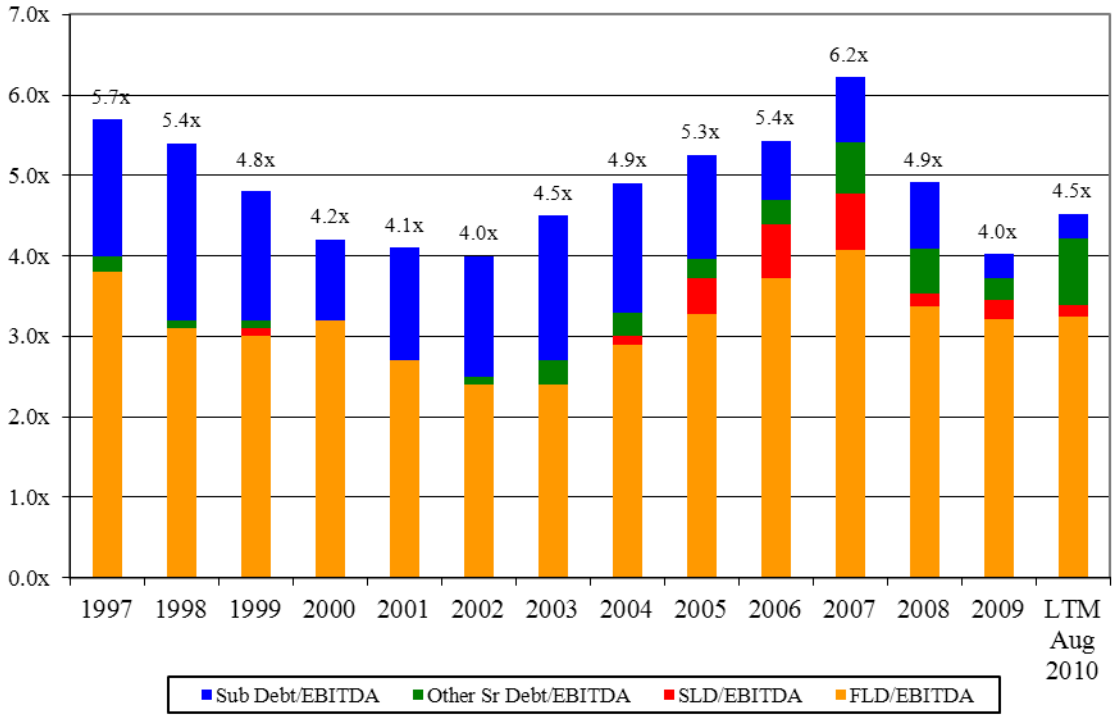
Investing and Lending Environment

When addressing the current and expected investing and lending environment for the private equity asset class, we focused on the following major themes:

- Current deal pricing relative to long-term averages
- Debt market conditions and credit availability
- Fundraising and commitment pace

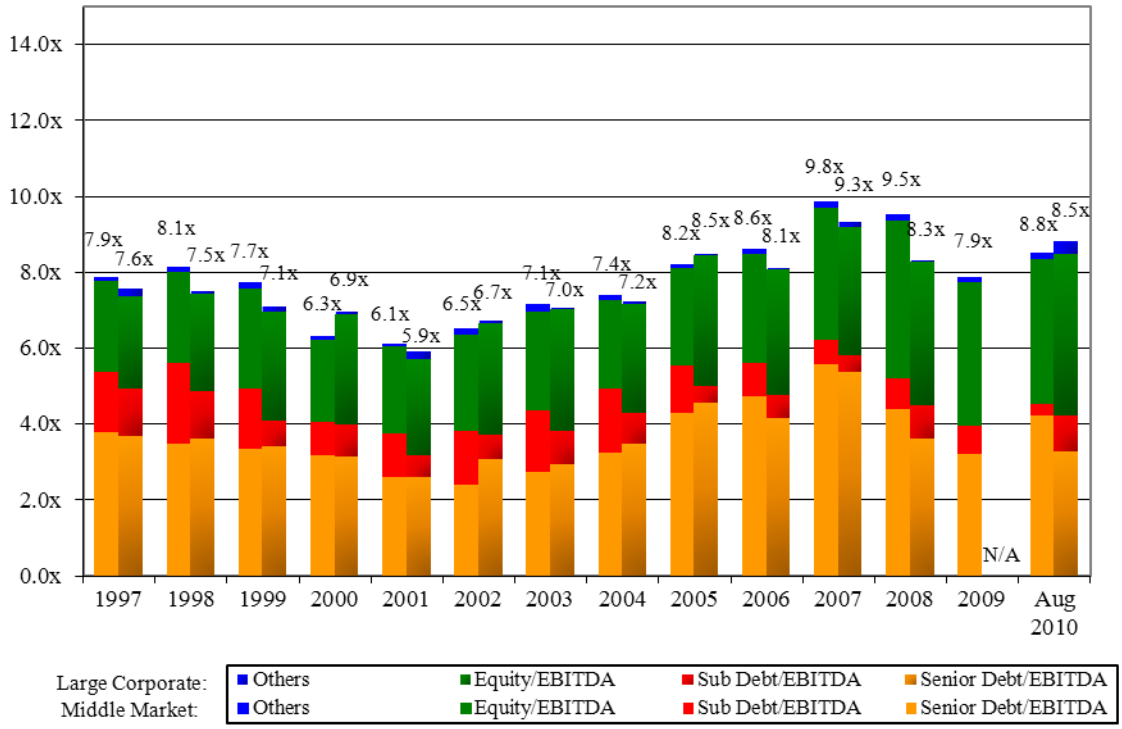
Figures 72 and **73** illustrate historical and current debt and purchase price multiples for large LBO transactions.

Figure 72: Average Debt Multiples of Large Corporate LBO Loans (Defined as Issuers with EBITDA of more than $50M)



Source: S&P.

Figure 73: Average Purchase Price

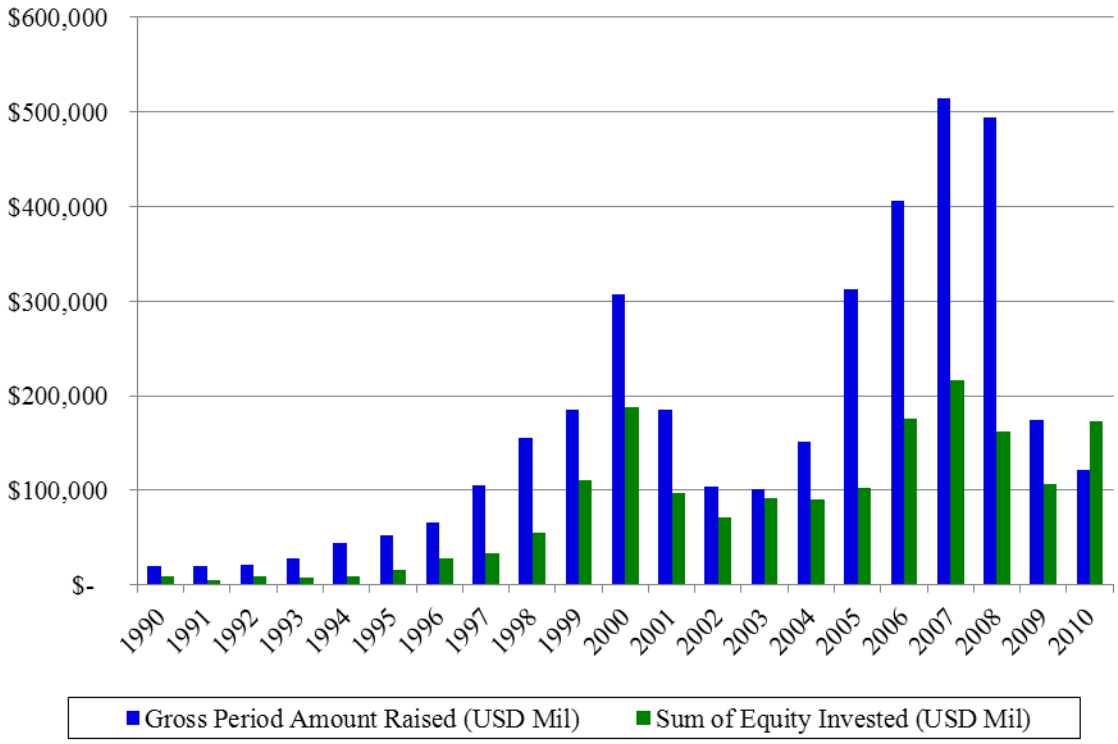


Source: S&P.

The figures highlight that while deal pricing and the use of credit in buyout transactions have both decreased from high levels, the current levels remain close to historical norms and are a significant improvement over 2009. While improved credit conditions may improve return prospects, we believe that this is at least partially countered by higher equity requirements, which we believe will remain for quite some time. Consequently, we do not believe that the current credit climate will have a strong negative or positive effect on the investment environment or expected future returns. The net effect of the slower investment activity in 2009 prolonged an attractive buying opportunity, but improved credit conditions and available capital has already pushed up deal prices in 2010.

Figure 74 shows historical fundraising versus invested capital for all private equity funds over the last 20 years. As demonstrated in the chart below, a significant amount of capital raised in 2006-2008 has yet to be deployed, creating a meaningful capital overhang. While the overhang is substantial, 2010 marked the first year in the last 20 in which investments outpaced fundraising. We expect the capital overhang to contribute slightly to deal price appreciation in the near term. However, we also expect that lower levels of near-term fundraising in private equity coupled with acceleration in the investment pace of sidelined capital will reduce overhang in the coming years.

Figure 74: Capital Raised vs. Capital Invested
(1990 – 2010)



Source: Thompson Reuters

Investing and Lending Environment

It is our view that after considering all of the previously discussed factors collectively, the net effect is to preserve the return expectations for private equity. On the one hand, near-term valuations are still slightly discounted and leverage and capital availability are returning in force to the market. On the other, longer term fundraising is expected to be subdued and higher equity requirements and more traditional

underwriting standards are expected to prevail in the asset class. In the interest of maintaining a conservative approach to asset class assumptions, we believe an arithmetic return assumption of 12.25%, or 425 bps above our arithmetic US Large/Mid Cap Equity return assumption, is the most appropriate course.

With regard to our volatility assumption, we continue to face the challenge that observed volatility does not translate to a practical and realistic conclusion. As **Figure 70** illustrates, the observed volatility for private equity returns is more than 600 bps above the volatility of domestic equity. Recognizing that there are additional liquidity and valuation premiums not captured by the standard deviation calculation, we believe it is appropriate to adjust the number higher. Our modeling efforts continue to support the fact that the RVK asset allocation process was highly insensitive to a large range of potential volatility assumptions. Our conclusion was that the final volatility assumption number be one that placed the private equity asset class in close proximity to the capital markets line. Based on a triangulation with other asset classes and the capital markets line, an expected risk (standard deviation) value of 30.25% was derived.

OTHER ALTERNATIVE INVESTMENTS

Commodities

Broad Commodities

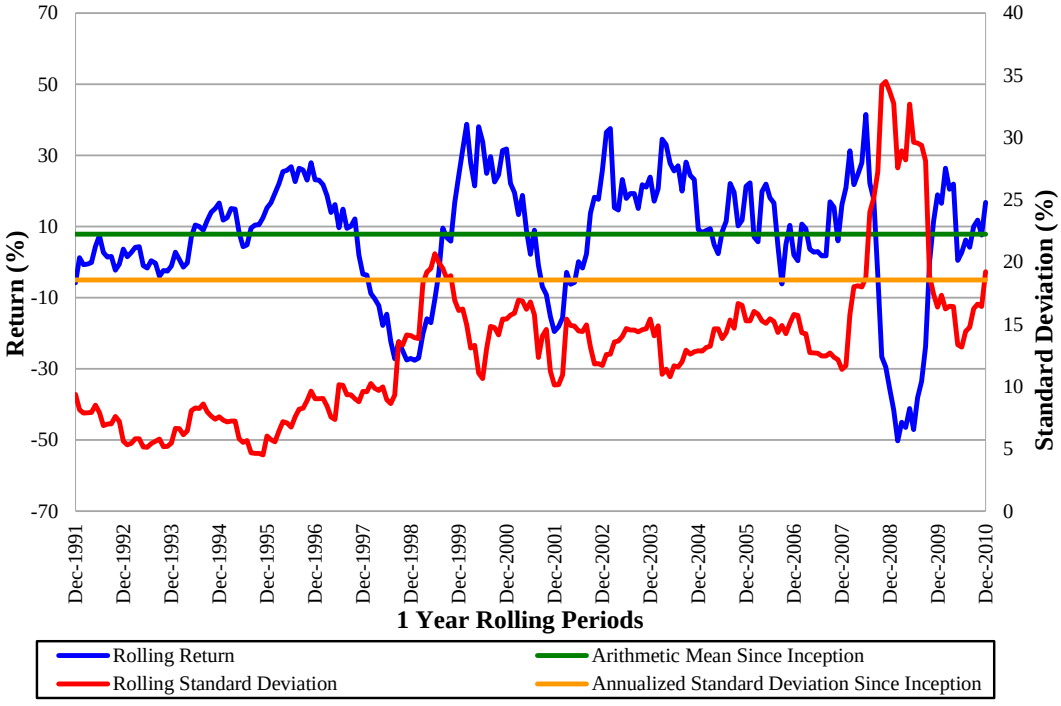
Broad commodities, reflecting exposure to areas such as energy, metals, agriculture and livestock, are modeled using the Dow Jones-UBS Commodity Index ("DJ-UBSC Index"), which restricts the composition to no more than 33% from one sector (e.g. energy). **Figure 75** summarizes the long-term forward-looking assumption set based on this 2011 analysis, and also highlights the changes from our previous assumption set.

Figure 75: Commodities Asset Class Assumptions

Asset Class	2010			2011			Variance		
	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %
Commodities	7.75	19.00	6.11	7.25	19.75	5.48	-0.50	+0.75	-0.64

As of December 31, 2010, the arithmetic mean of annual returns of the DJ-UBSC Index since its inception in January 1991 is 7.84% and the standard deviation of annual returns has been 18.57%. The figure below plots these since inception averages against the rolling one-year return and risk, highlighting the more recent period of volatility relative to historical norms.

Figure 76: Dow Jones-UBS Commodity Index
(1992 – 2010)



Source: Dow Jones. (2010)

While the returns of the index are moderate since inception, it is important to note that through the bulk of this time period the United States had experienced long, stable periods of moderate economic growth and stable inflation. The past two market crises of 2000-2002 and 2007-2009 appear to be outliers in the history of the return series. Commodity performance was driven as much or more by global economic conditions as it was by any short-term inflation forces. The investable commodity benchmark used as proxy in this analysis and its past response to capital market conditions suggest that commodities assumptions need to factor in broader macroeconomic and market risks. For these reasons we support higher volatility for commodities than what is suggested by the historic benchmark behavior alone.

Other Commodity Dynamics

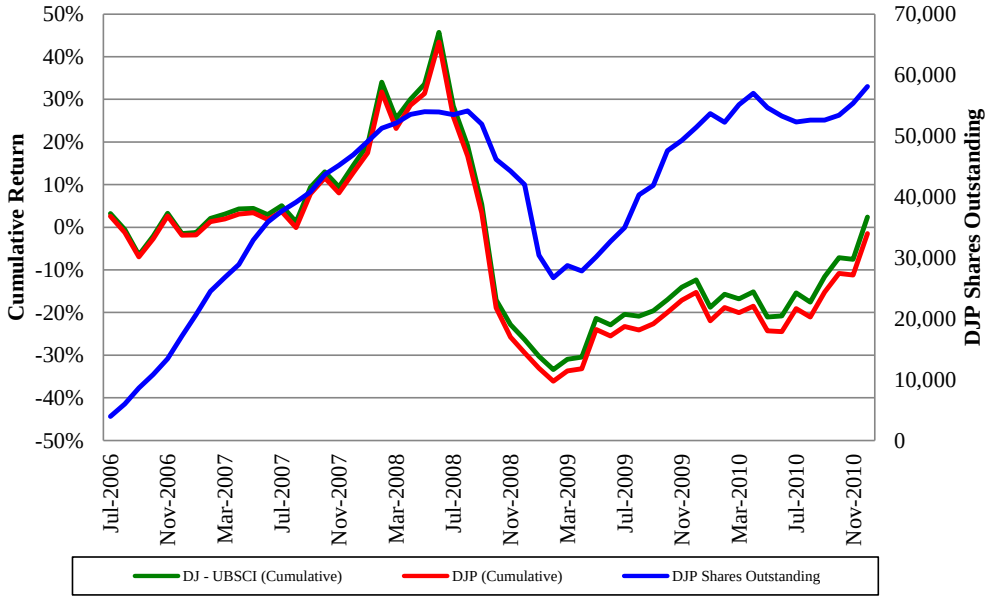
Increased Capital Flows

We believe that increased investment in commodities by institutional and individual investors, coupled with a proliferation of exchange-traded commodity funds, could increase systematic risk for commodity investments in the coming years. According to Barclays Capital, commodity investments increased to $376 billion in 2010, which is a 40% increase over 2009. Further, at a 2010 Barclays Capital institutional investor conference, 69% of those polled planned to increase commodity exposure over the next few years. Lastly, according to a national survey conducted by Morningstar, over 14% of new mutual funds and 20% of ETFs added in 2010 were alternatives and commodity related.

Strong capital inflows into passive commodity vehicles and corresponding derivatives issuance is creating negative roll yields (i.e., contango), which is an additional challenge to futures-based investment strategies. Absent meaningful cash or collateral yield, commodity performance is heavily reliant on future spot price performance to generate positive returns. Collateral yield for broad based commodity strategies has fallen below 0.50% during the past two years. Actual roll yields for broad-based commodities have turned negative over the past several years and many commodity assets with carry costs (e.g. oil, agriculture) appear to be facing a similar dynamic with short- and intermediate-term forward curve structures in contango. Significant and persistent commodity supply shortages are needed to counterbalance contango conditions but there are no clear indication of long-term supply constraints (notwithstanding geopolitical risks or short-term supply shocks) within commodities markets currently.

Figure 77 on the next page shows the growth of passive investment approaches and the impact that these investment vehicles have on commodities futures markets in underlying futures contracts through a single ETF (Ticker: DJP) that tracks the DJ-UBSC Index.

Figure 77: Dow Jones-UBS Commodity Index vs. DJP Cumulative Return and Outstanding Shares Comparison
(July 2006 – December 2010)

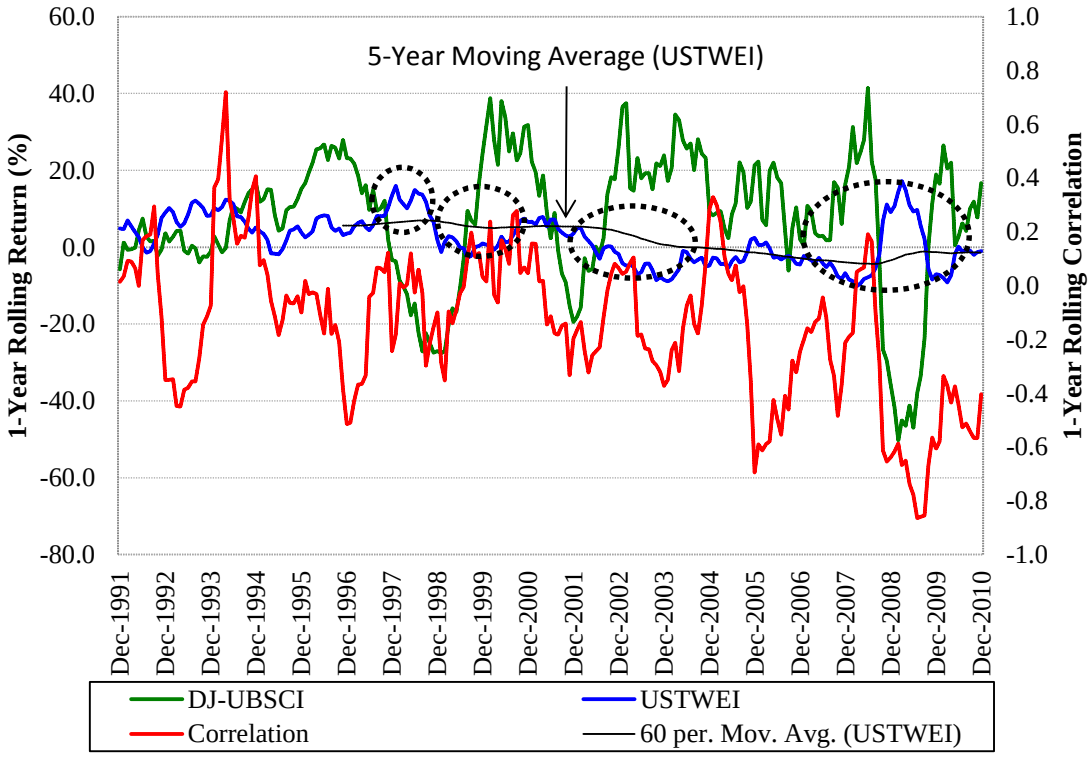


Source: Bloomberg and Lipper

US Dollar Exchange Rates

Rising debt levels in the US threaten to cause the US dollar to experience more frequent and higher volatility. Commodity prices are quoted in dollars and past periods of dollar depreciation have produced a negative correlation to commodity pricing over short time intervals. In periods where the relative strength of the dollar index has materially deviated from its longer term average, commodities experienced large performance swings, both above and below 20%, coinciding with shifts in relative currency strength. The figure on the next page highlights those periods where currency strength deviated and commodities experienced a corresponding performance shift. The dollar strength indicator used in our analysis is the Federal Reserve created Trade Weighted US Dollar Index ("USTWEI"). Increased risk assumptions for broad commodities are analogous with our increased inflation volatility assumption for 2011.

Figure 78: Dow Jones-UBS Commodity Index vs. Trade Weighted US Dollar Index Return and Correlation Comparison
(1992 – 2010)

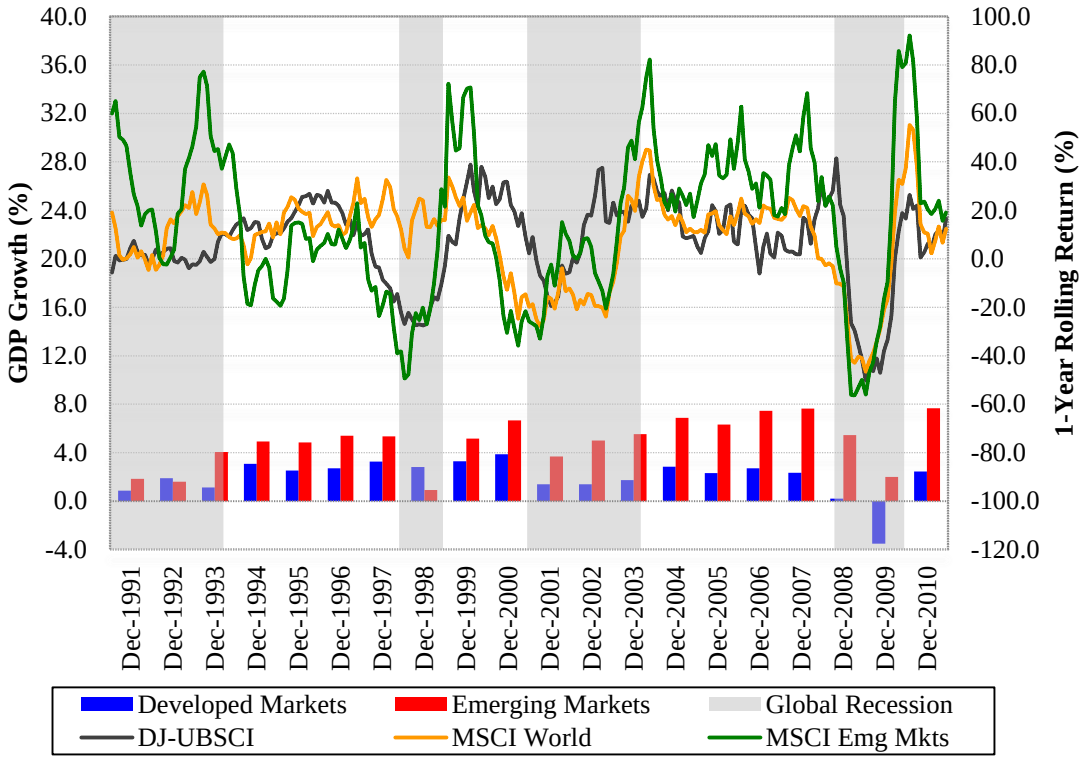


Source: Bloomberg

Conclusion

Long-term drivers of global growth (aside from large emerging market economies) appear likely to remain weak for the next several years. Combining mediocre global growth expectations, large anticipated capital inflows into commodities, and potential resistance from more fragile developed economies to readily absorb rising price inputs leads us to assume a long-term rate of return of 7.25% for broad commodities. Consistent with other asset class risk assumptions for 2011, the long-term risk of broad commodities is assumed to increase and our assumption for risk is 19.75%, which represents an increase of 0.75%.

Figure 79: GDP Growth, Global Recession, and Return Comparison
(1992 – 2010)



Source: World Bank World Development, International Monetary Fund, HIS Global Insight

Real Return Strategies

Real return strategies include investments expected to perform well in inflationary environments, typically targeting a return that exceeds inflation by a premium (e.g. CPI + 5%). There are a number of real return implementation strategies. RVK's Real Return assumption set is intended for those clients seeking implementation via a broadly diversified, pre-packaged approach (as opposed to implementation via direct investments in relevant sub-asset classes, which can typically be modeled separately).

The figure below summarizes the long-term forward-looking assumption set based on this 2011 analysis, and also highlights the changes from our previous assumption set.

Figure 80: Real Return Asset Class Assumptions

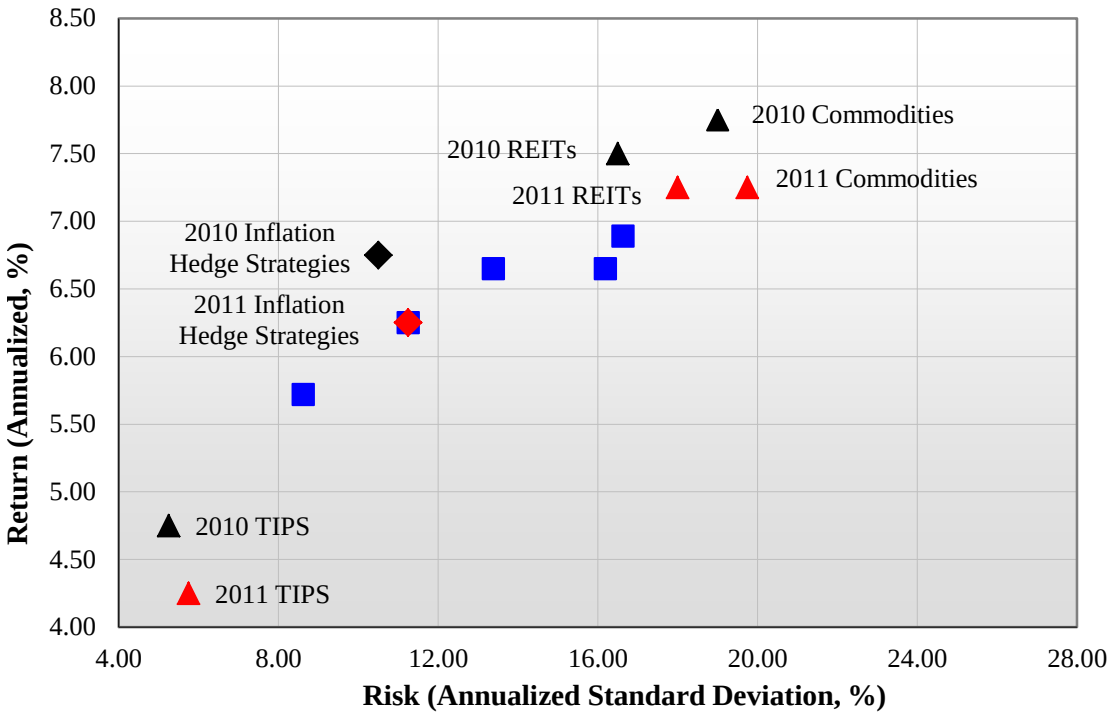
Asset Class	2010			2011			Variance		
	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %	Return (Arithmetic) %	Risk (Standard Deviation) %	Return (Compound) %
Real Return	6.75	10.50	6.24	6.25	11.25	5.66	-0.50	+0.75	-0.58

When benchmarking real return strategies, it is important to note that, similar to GDP growth, inflation rarely changes dramatically from quarter to quarter, but instead follows secular cycles that result from structural changes in the economy. Because inflationary periods are expected to have a long duration, the price impact on inflation hedging assets should be expected to occur principally in response to changes in *expected* inflation. As a result, we expect real return strategies to provide a return premium above

inflation when measured over a long time period. However, the quarter to quarter and sometimes year to year returns may deviate significantly from measured changes in CPI.

Our assumptions for real return strategies are based largely on a representative portfolio consisting of equal parts Treasury Inflation-Protected Securities ("TIPS"), broad commodities, and public real estate ("REITs"). However, we also analyze the subset of real return managers most commonly used by RVK's clients and we triangulate to a return premium of 3.5% to 4.0% above RVK's inflation assumption of 2.50%. **Figure 81** provides a summary snapshot of this analysis.

Figure 81: Real Return Risk/Return Analysis
(1992 – 2010)



Source: RVK Analysis. (2010)

The figure above details the expected risk/return profile of various real return strategy providers (notated by the blue squares), using RVK's 2011 assumption set for the underlying asset class exposures represented in each manager's portfolio and weighted based on the average since inception asset allocation of each strategy. Once again, it is important to note that the composition of these strategies changes significantly based on manager expectations, and most do not hold a stable percentage of the various component asset classes. As a result, a buy and hold return expectation should be viewed as only a very general predictor of future risk and return expectations, as manager skill plays a critical role in providing an effective inflation-hedge.

As plotted in the previous figure, we expect a long-term return for Real Return of 6.25%, a reduction of 0.50% relative to our 2010 assumption, and we have also increased our risk assumption by 0.75%, up to 11.25%. These revisions were based on 2011 assumption adjustments associated with the underlying component strategies (TIPS, Commodities, and REITs).

Appendix A

Figure A-1: Calendar Year 2011 Correlation Matrix

	Global Equity	Large/Mid Cap US Equity	Small/Mid Cap US Equity	Broad US Equity	Dev'd Large/Mid Int'l Equity	Dev'd Small/Mid Int'l Equity	Emerging Markets Equity	Broad International Equity	Intermediate Fixed Income	Non-US Fixed Income UH	TIPS	Low Duration Fixed Income	Long Duration Fixed Income	High Yield Fixed Income	Real Return	Core Real Estate	Non-Core Real Estate	REITs	Absolute Return	Commodities	Private Equity	Cash Equivalents	U.S. Inflation
Global Equity	1.00	0.93	0.89	0.94	0.96	0.91	0.86	0.97	0.03	0.21	0.09	-0.28	0.06	0.68	0.71	0.40	0.29	0.80	0.69	0.43	0.75	-0.06	0.05
Large/Mid Cap US Equity	0.93	1.00	0.88	0.99	0.83	0.74	0.74	0.83	0.23	0.05	0.05	0.06	0.25	0.58	0.61	0.30	0.27	0.68	0.48	0.30	0.70	0.04	0.01
Small/Mid Cap US Equity	0.89	0.88	1.00	0.93	0.79	0.77	0.76	0.81	0.16	-0.01	0.05	-0.01	0.17	0.63	0.65	0.26	0.19	0.70	0.51	0.33	0.67	-0.01	-0.01
Broad US Equity	0.94	0.99	0.93	1.00	0.84	0.76	0.76	0.84	0.21	0.04	0.05	0.04	0.22	0.60	0.63	0.31	0.25	0.70	0.50	0.31	0.71	0.03	-0.02
Dev'd Large/Mid Int'l Equity	0.96	0.83	0.79	0.84	1.00	0.95	0.82	0.99	0.04	0.32	0.10	-0.26	0.08	0.63	0.72	0.41	0.28	0.78	0.65	0.45	0.70	-0.07	0.05
Dev'd Small/Mid Int'l Equity	0.91	0.74	0.77	0.76	0.95	1.00	0.80	0.96	0.04	0.33	0.17	-0.30	0.09	0.66	0.75	0.40	0.27	0.77	0.66	0.49	0.66	-0.15	0.07
Emerging Markets Equity	0.86	0.74	0.76	0.76	0.82	0.80	1.00	0.88	-0.01	0.13	0.12	-0.30	0.03	0.63	0.71	0.29	0.18	0.73	0.70	0.45	0.61	-0.15	0.05
Broad International Equity	0.97	0.83	0.81	0.84	0.99	0.96	0.88	1.00	0.02	0.29	0.13	-0.29	0.07	0.66	0.75	0.39	0.26	0.79	0.70	0.49	0.71	-0.11	0.06
Intermediate Fixed Income	0.03	0.23	0.16	0.21	0.04	0.04	-0.01	0.02	1.00	0.43	0.74	0.86	0.95	0.29	0.25	-0.04	-0.04	0.21	0.14	0.04	-0.25	0.25	-0.16
Non-US Fixed Income UH	0.21	0.05	-0.01	0.04	0.32	0.33	0.13	0.29	0.43	1.00	0.50	0.39	0.40	0.07	0.43	0.01	-0.07	0.34	0.08	0.23	-0.13	0.09	-0.07
TIPS	0.09	0.05	0.05	0.05	0.10	0.17	0.12	0.13	0.74	0.50	1.00	0.45	0.69	0.28	0.48	0.18	0.12	0.24	0.18	0.31	-0.14	0.01	0.10
Low Duration Fixed Income	-0.28	0.06	-0.01	0.04	-0.26	-0.30	-0.30	-0.29	0.86	0.39	0.45	1.00	0.71	-0.01	-0.10	-0.04	-0.11	-0.08	0.02	-0.10	-0.36	0.50	-0.04
Long Duration Fixed Income	0.06	0.25	0.17	0.22	0.08	0.09	0.03	0.07	0.95	0.40	0.69	0.71	1.00	0.29	0.26	-0.04	-0.01	0.21	0.14	0.04	-0.18	0.15	-0.22
High Yield Fixed Income	0.68	0.58	0.63	0.60	0.63	0.66	0.63	0.66	0.29	0.07	0.28	-0.01	0.29	1.00	0.63	0.14	0.09	0.61	0.39	0.31	0.43	-0.06	0.04
Real Return	0.71	0.61	0.65	0.63	0.72	0.75	0.71	0.75	0.25	0.43	0.48	-0.10	0.26	0.63	1.00	0.47	0.30	0.85	0.62	0.81	0.48	-0.08	0.20
Core Real Estate	0.40	0.30	0.26	0.31	0.41	0.40	0.29	0.39	-0.04	0.01	0.18	-0.04	-0.04	0.14	0.47	1.00	0.90	0.37	0.35	0.35	0.45	0.25	0.07
Non-Core Real Estate	0.29	0.27	0.19	0.25	0.28	0.27	0.18	0.26	-0.04	-0.07	0.12	-0.11	-0.01	0.09	0.30	0.90	1.00	0.27	0.30	0.18	0.40	0.15	0.02
REITs	0.80	0.68	0.70	0.70	0.78	0.77	0.73	0.79	0.21	0.34	0.24	-0.08	0.21	0.61	0.85	0.37	0.27	1.00	0.46	0.38	0.53	-0.09	0.02
Absolute Return	0.69	0.48	0.51	0.50	0.65	0.66	0.70	0.70	0.14	0.08	0.18	0.02	0.14	0.39	0.62	0.35	0.30	0.46	1.00	0.48	0.53	0.19	0.15
Commodities	0.43	0.30	0.33	0.31	0.45	0.49	0.45	0.49	0.04	0.23	0.31	-0.10	0.04	0.31	0.81	0.35	0.18	0.38	0.48	1.00	0.31	-0.03	0.23
Private Equity	0.75	0.70	0.67	0.71	0.70	0.66	0.61	0.71	-0.25	-0.13	-0.14	-0.36	-0.18	0.43	0.48	0.45	0.40	0.53	0.53	0.31	1.00	-0.02	0.14
Cash Equivalents	-0.06	0.04	-0.01	0.03	-0.07	-0.15	-0.15	-0.11	0.25	0.09	0.01	0.50	0.15	-0.06	-0.08	0.25	0.15	-0.09	0.19	-0.03	-0.02	1.00	0.38
U.S. Inflation	0.05	0.01	-0.01	-0.02	0.05	0.07	0.05	0.06	-0.16	-0.07	0.10	-0.04	-0.22	0.04	0.20	0.07	0.02	0.02	0.15	0.23	0.14	0.38	1.00

Correlation greater than 0.5

Correlation between 0 and 0.5

Correlation less than 0