M Financial Group™

DUE CARE BULLETIN

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Evaluating IUL Index Accounts: Sorting Through the Options of the Industry's Fastest Growing Product Line

Life insurance due care requires an understanding of the factors that impact policy performance and drive product selection.

M Financial Group continues to lead the industry in life insurance due care and client advocacy, providing valuable insight and analysis that delivers significant value to clients.

Indexed Universal Life (IUL) continues to grow in popularity among buyers and carriers actively trying to differentiate their products in an increasing crowded space. This M Due Care Bulletin is designed to provide clarity on evaluating the various options—Higher Cap Rates versus Lower Cap Rates, Total Return Index versus Index with No Dividends, Point-to-Point versus Point-to-Monthly Average Growth Rate Calculation—and facilitate an informed buying decision.

IUL offers crediting rates based on the growth rate of an underlying index (e.g., S&P 500) and is subject to a floor and a cap. Many index account variations exist with the "standard" index account, which has been the most popular option to date:

- 1-year index segment
- Point-to-point growth rate calculation
- S&P 500 index with no dividends
- 100% participation rate
- 0-1% floor
- 10-13% cap

The recent introduction of an "alternative" index account has generated some excitement and includes the following features:

- 1-year index segment
- Point-to-monthly average growth rate calculation
- Total return S&P 500 (i.e., includes dividends)
- 100% participation rate
- 0% floor
- 18% cap

The most attractive features of this alternative option are the total return index (which includes dividends) and the 18% cap. Most S&P 500 index accounts do not include dividends. Dividends typically provide 1-3% in additional annual yield. The 18% cap is seemingly very attractive as most index accounts offer cap rates in the 10-13% range.

Additional analysis—beyond comparing a couple of index account levers—is appropriate in order to truly evaluate the potential impact of an index account on product performance.

Index Account Pricing

Index account pricing is typically supported by three main factors:

1. General Account Portfolio Yield – Insurer general account portfolio yields support UL crediting rates but are also being used to support the index floor in IUL products. Assuming all factors are equal, a higher portfolio yield will support a more competitive index account such as a higher cap rate. Insurer portfolios typically consist of 80-90% investment grade bonds and mortgages, generally safe investments with efficient capital requirements and stable yields that effectively support UL crediting rates (i.e., an efficient asset/liability match). As such, it is difficult for insurers to generate portfolio yields that allow them to offer a significantly more competitive index account.

2. Option Package Price – Insurers typically purchase a package of call options on the underlying index, which is offered by the options market. Assuming all factors are equal, a lower option package price will support a more competitive index account (e.g., a higher cap rate). However, because the options market provides the pricing and risk transfer, insurers typically do not have a competitive advantage in securing more favorable pricing.

3. Product Charges – IUL product charges are typically higher than either UL or VUL product charges because higher product charges can be used to support more marketable index accounts (e.g., those with higher cap rates). IUL buyers tend to focus on cap rates (the higher the better); therefore, insurers typically increase prices for higher cap rate products, offsetting the cost of the higher cap with product charges paid by the policyholder. This tactic—enhancing a feature like the cap rate (that may or may not have value) at the expense of the policyholder—is a reminder that IUL product performance is determined by both the indexed crediting rate and product charges, not just the cap rate.

Appendix A provides a detailed example of a typical investment strategy (i.e., general account portfolio and option package) supporting an index account.

The combination of these three pricing factors will determine the competitiveness of the index account and ultimately, the illustrated policy performance. Finding pricing advantages is challenging and therefore insurers are now offering index account alternatives where portions of the package may be very competitive/marketable (e.g., high cap rate) but offset by additional costs (e.g., higher product charges or perhaps a more conservative calculation for determining the index growth rate) in order to make the pricing work.

Evaluating Index Accounts and Product Performance

Because of the complexity of IUL products, it is important not to focus solely on the cap rate—or any single element—when evaluating various products.

The following is suggested when evaluating index accounts and product performance:

- Review illustrations with an identical crediting rate assumption—this will show which product has the lowest (or highest) product charges. With all crediting rates being equal, the product with the superior performing illustration is the product with the lowest product charges. This analysis may show the product with the more competitive index account (e.g., highest cap rate) also has the highest product charges.

- Review hypothetical historical crediting rates—while the past is not a predictor of the future, when evaluating index accounts there is value in applying the current index account mechanics (e.g., participation rate, cap, floor, etc.) to the historical returns of the underlying index and calculate the hypothetical historical crediting rates (i.e., quantify the potential performance differential of different index accounts). For example, assuming all factors are equal, higher cap rates will provide higher index account crediting rates, which can be quantified with hypothetical historical crediting rate calculations. The equity market has experienced up and down cycles and therefore it is recommended that multiple historical time periods be reviewed as results may differ by time period.

- Review illustrations with hypothetical historical crediting rates—this last critical piece of analysis evaluates the complete package of the index account and product charges. It is important to consider the product with the superior performing illustration.

One other consideration is the carrier's cap rate historical track record. Cap rates are not guaranteed and may be changed over time (as may be required from declining portfolio yields or more expensive option package pricing). However, it appears that some IUL carriers have a track record of offering very high cap rates that were not supportable and resulted in multiple cap rate reductions. It is recommended that consideration be given to IUL carriers that have a strong track record of maintaining cap rates consistent with, or better than, the general IUL market.

Evaluation of Alternative Index Account versus Standard Index Account

An 18% cap rate on a total return index is definitely appealing on the surface. However, there is more to the story. One key factor is the underlying growth rate computation for the alternative index account, which is point-to-monthly average (as opposed to the point-to-point calculation for the standard index account).

Standard Index Account: Point-to-Point Growth Rate = $(P_{12} / P_0) - 1$

Alternative Index Account: Point-to-Monthly Average Growth Rate = $\{(P_1 + P_2 + P_3 + \ldots + P_{12}) / 12\} / P_0 - 1$

Where P# = the value of the index at the end of month #

Appendix B provides detailed growth rate calculation examples.

While a point-to-monthly average calculation can help smooth returns (i.e., decrease volatility) it also provides performance drag in a generally increasing equity market. However, the offset to the point-to-monthly average calculation is the high 18% cap, which can provide higher annual returns and greater volatility. The question is how will the index account perform?

The hypothetical historical compound annual crediting rates are as follows for three historical time periods. Note the cap and floor for the standard index account are 12% and 0%, respectively.

1. Aggressive Up Market Cycle: 12-Year Hypothetical Historical Crediting Rate Results—1988-1999

(S&P 500 with Dividends Compound Annual Growth Rate = 19.1%)

	Standard Index Account[1]	Alternative Index Account[2]	Difference Alternative vs. Standard
Average Annual Crediting Rate	9.0%	10.2%	1.2%
Standard Deviation of Annual Crediting Rates	4.8%	7.0%	2.2%
Compound Annual Crediting Rate	8.9%	10.0%	1.1%

2. Volatile Market Cycle: 13-Year Hypothetical Historical Crediting Rate Results—2000-2012

(S&P 500 with Dividends Compound Annual Growth Rate = 1.6%)

	Standard Index Account[1]	Alternative Index Account[2]	Difference Alternative vs. Standard
Average Annual Crediting Rate	5.8%	3.8%	-2.0%
Standard Deviation of Annual Crediting Rates	5.7%	4.1%	-1.6%
Compound Annual Crediting Rate	5.7%	3.7%	-2.0%

3. Long-Term Cycle: 25-Year Hypothetical Historical Crediting Rate Results—1988-2012

(S&P 500 with Dividends Compound Annual Growth Rate = 9.7%)

	Standard Index Account[1]	Alternative Index Account[2]	Difference Alternative vs. Standard
Average Annual Crediting Rate	7.3%	6.9%	-0.4%
Standard Deviation of Annual Crediting Rates	5.4%	6.5%	1.1%
Compound Annual Crediting Rate	7.2%	6.7%	-0.5%

[1]Point-to-point - S&P 500 without dividends - 100% participation rate - 0% floor - 12% cap

[2]Point-to-monthly average - S&P 500 with dividends - 100% participation rate - 0% floor - 18% cap

Equity Market Expectation 1:

If the expectation is that equity index returns will exceed 20% annually on a consistent basis, then the index account with the 18% cap will likely provide higher crediting rates relative to the standard index account with only a 12% cap.

From 1988-1999 the alternative index account has a hypothetical historical compound annual crediting rate of 10.0%, versus 8.9% for the standard index account. Over this time period, the S&P 500 with dividends returned 19.1% on a compound annual growth rate basis with annual returns at 20% or better in seven years of the twelve-year period. With this type of expectation, it may be argued the superior alternative is to be fully invested in the equity market via a variable UL (VUL) product. Many individuals would consider the expected additional 9.1% annual yield (19.1% less 10.0%) from being fully invested in the market would more than offset concerns with expected additional market risk/volatility.

Equity Market Expectation 2:

If the expectation is a volatile equity market with significant positive and negative annual returns, then the standard index account may provide better value. From 2000-2012, the S&P 500 with dividends returned 1.6% on a compound annual growth rate basis (minus 0.2% without dividends). There were four years with negative returns (including a negative 37% in 2008) and six years with double-digit positive returns (but only two years that exceeded 20%).

Over this time frame, the point-to-monthly average calculation for the alternative index account provides too much drag and the resulting hypothetical historical compound annual crediting rate is 200 bps less than what is provided in the standard index account (3.7% versus 5.7%). This type of equity market expectation may be considered favorable for IUL, due to the downside protection provided by the floor, as the hypothetical 5.7% IUL crediting rate from the standard index account significantly exceeds the 1.6% return of being fully invested in the market via VUL. In addition, the 5.7% hypothetical IUL crediting rate would have compared favorably to UL crediting rates over this time frame where cumulative annual crediting rates would have typically been less than 5.5% (although UL will most likely have lower product charges).

Equity Market Expectation 3:

If the expectation is that the equity market will provide long-term results similar to the past 25 years (1988-2012), a period that includes both a significant market run-up and significant down cycles (2000-2002 and 2008), then both index accounts perform well on a hypothetical historical basis with the edge being provided by the standard index account by 50 bps (7.2% hypothetical historical compound annual crediting rate for the standard index account versus 6.7% for the alternative index account).

Over the 25-year period, the S&P 500 with dividends returned 9.7% on a compound annual yield basis, which is 250 bps greater than the standard index account hypothetical crediting rate. This may be considered essentially the same result for individuals fully invested in the market, with the potential for the additional 250 bps of annual yield, and other individuals opting for IUL with potential yield give-up but wanting the downside protection of the floor.

Appendix C includes a detailed exhibit of annual historical returns and additional commentary.

Summary

It is recommended that the evaluation of index accounts include the following:

1. Research index account mechanics:
   a. Index - S&P 500 without dividends, S&P 500 with dividends, international, etc.
   b. Growth rate calculation - point-to-point, point-to-monthly average, monthly cap, etc.
   c. Index Term – 1 year, 2 years, 5 years, etc.
   d. Participation rate, floor, cap, etc.
2. Calculate hypothetical historical crediting rates to quantify the potential performance differential for the index account crediting rate.
3. Run illustrations with the hypothetical historical crediting rates to evaluate the entire package of index account crediting and product charges. Consideration should be given to the product with the superior illustration.

With steps 1 and 2 applied, it could be argued that neither index account has an expected dominant performance advantage. The alternative index account with the 18% cap will outperform the standard index account when the equity market has many annual returns in excess of 20% due to the 18% cap (although with this expectation it may be considered more appropriate to be fully invested in the equity market via VUL).

With a more volatile equity market expectation (both positive and negative annual returns) similar to what we have seen the market do more recently, it appears the edge goes to the standard index account versus the alternative index account (note this assumption is attractive for IUL versus VUL with downside protection being provided by the floor in IUL).

With a longer-term expectation, similar to what the equity market has provided over the last 25 years, the standard index account has a slight edge over the new index account. For the alternative index account, it appears that the point-to-monthly average growth rate calculation, in most scenarios, provides more drag than the upside potential provided by the 18% cap.

To complete the analysis, illustrations should be run with the hypothetical historical crediting rates based on the appropriate time period that matches the client's equity market expectations. Consideration would be given to the product (and index account) with the superior performing illustration.

For More Information

To learn more, please contact a member of M Financial's Product Management team.

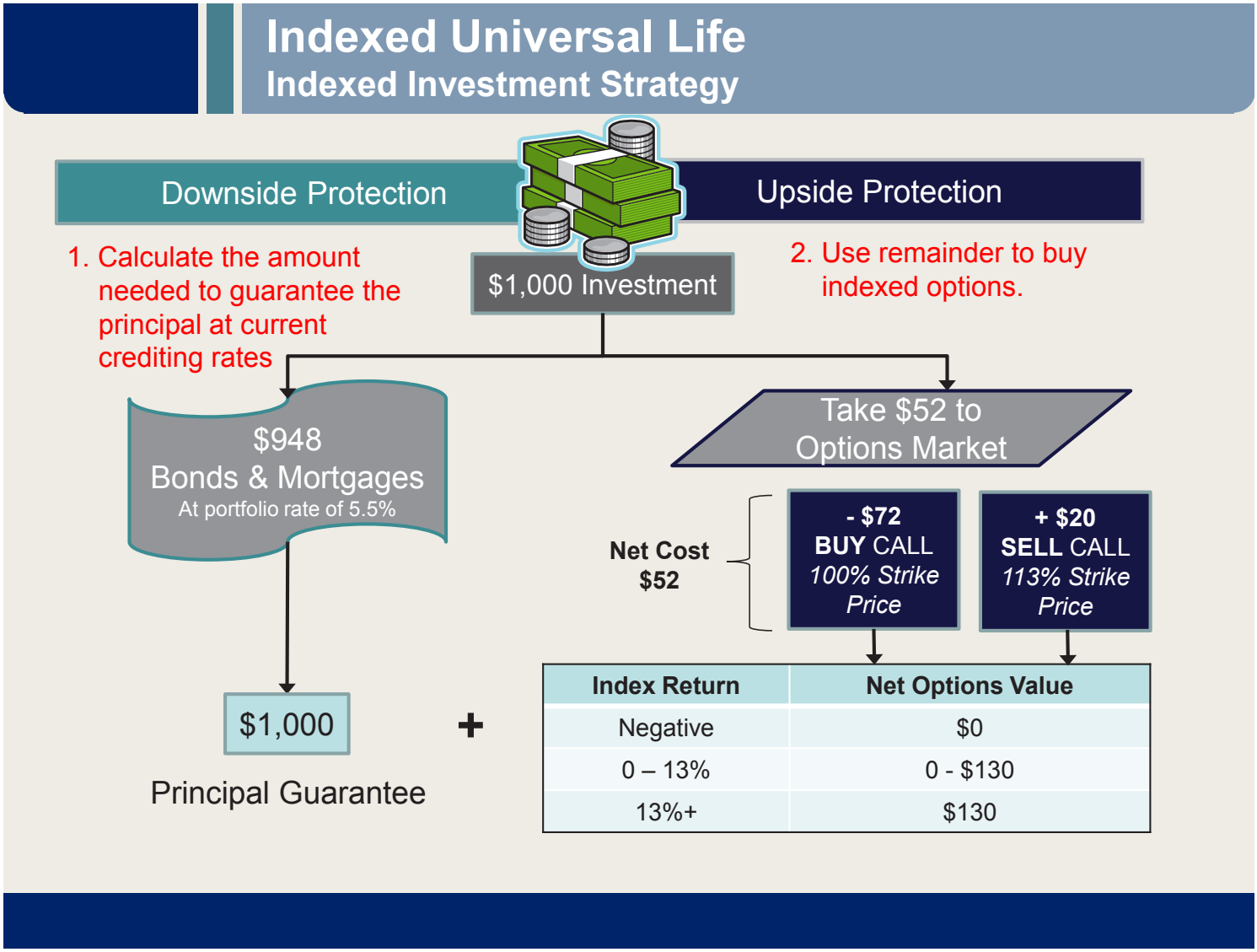
Wayne Tonning
503.414.7430
wayne.tonning@mfin.com

Dennis McMahan
503.414.7358
dennis.mcmahan@mfin.com

Jennifer Lachnite
503.414.7348
jennifer.lachnite@mfin.com

Derrick Hanson
503.414.7234
derrick.hanson@mfin.com

M Financial Group
1125 NW Couch Street, Suite 900
Portland, OR 97209
800.656.6960
www.mfin.com



The IUL crediting mechanics and resulting crediting rate are supported by the combination of investing in the general account (same as traditional UL) and purchasing a package of call options on the relevant equity index. A portion of the net premium (net of product charges) is allocated to the general account, which earns a portfolio yield based primarily on investment grade bonds and mortgages. The general account yield supports the floor. As an example, if the general account is yielding 5.5%, the floor is 0%, and the net premium is $1,000, then $948 will be allocated to the general account (1,000 / 1.055). By the end of the one-year segment term, the $948 will grow to $1,000 (948 X 1.055), thereby providing the guaranteed floor.

The remainder of the net premium ($1,000-$948=$52) will be used to purchase a package of call options on the respective equity index. The package of call options will support the index return, including the cap. By hedging the index return, the insurer does not lose money if the return is below the floor, but also does not make money if the return is above the cap. All of the equity index return risk is transferred to a third party.

The hedging strategy described above is the prevailing industry approach to pricing an IUL crediting rate.

Appendix B: Examples of Index Growth Rate Calculations

Point-to-Point Index Account
Defines the growth in market value of the index as the market value at the end of the segment term, divided by the market value at the end of the preceding segment term, less one.

Example #1 (Point-to-Point Index Credit)
Assumptions:
Index: S&P 500 without Dividends
Segment Term: 1 Year
Growth Rate Methodology: Point-to-Point
Participation Rate: 100%
Growth Cap: 12%
Growth Floor: 0%
Funds Allocated to Index Account on 12/15/12
S&P 500 Value on 12/15/12: 100
S&P 500 Value on 12/15/13: 110

Growth Rate = 110 / 100 – 1 = 10%
Index Credit = Growth Rate X Participation Rate and subject to Cap and Floor
=Max{Min(10% X 100% = 10%, 12%), 0%} = 10%

What if the 12/15/13 S&P 500 Value = 120?
Growth Rate = 120 / 100 – 1 = 20%
Index Credit = Max{Min(20% X 100% = 20%, 12%), 0%} = 12% (note that the cap is applied)

What if the 12/15/13 S&P 500 Value = 90?
Growth Rate = 90 / 100 – 1 = -10%
Index Credit = Max{Min(-10% X 100% = -10%, 12%), 0%} = 0% (note that the floor is applied)

Point-to-Monthly Average Index Account
Defines the growth in the market value of the index as the simple average of the market value of the last X months (typically the last 12) of the segment term, divided by the market value at the end of the preceding segment term, less one.

Example #2 (Point-to-Monthly Average Index Credit)
Assumptions:
Index: S&P 500 with Dividends
Segment Term: 1 Year
Growth Rate Methodology: Point-to-Monthly Average (last 12 months)
Participation Rate: 100%
Growth Cap: 18%
Growth Floor: 0%
Funds Allocated to Index Account on 12/15/12 with fund value equal to 100

Fund Values Last 12 Months of Segment Term

Date	Fund Value	Date	Fund Value
1/15/2013	95	7/15/2013	109
2/15/2013	100	8/15/2013	110
3/15/2013	105	9/15/2013	110
4/15/2013	100	10/15/2013	112
5/15/2013	105	11/15/2013	115
6/15/2013	107	12/15/2013	120

Growth Rate = Average Fund Value Last 12 Months / Fund Value When Segment Established

(95+100+105+100+105+107+109+110+110+112+115+120)/12=107.3
107.3/100-1=7.3%

Index Credit = Max{Min(7.3% X 100% = 7.3%, 18%), 0%} = 7.3%

Note the index credit with point-to-point would be 18% (120/100-1=20% subject to 18% cap).

If the market value of the index tends to increase in the last year of the segment term, then the point-to-point index account will provide a higher index credit (assuming the cap, floor, and participation rate are the same for both strategies). If the market value of the Index tends to decrease in the last year of the segment term, then the point-to-monthly average index account will outperform the point-to-point index account (assuming other mechanics of the index crediting formula are the same for both strategies).

Appendix C: Index Account Hypothetical Historical Growth Rate Calculations

Years	Calendar Year	Pt-to-Pt w/o Div (A)	Pt-to-Pt with Div (B)	Diff (B)-(A)	Pt-to-Avg with Div (C)	Diff (C)-(B)	Standard* Index Pt-to-Pt w/o Div (D)	Alt** Index Pt-to-Avg with Div (E)	Diff (E)-(D)
1	1988	12.4%	16.5%	4.1%	10.6%	-5.9%	12.0%	10.6%	-1.4%
2	1989	27.3%	31.6%	4.4%	19.8%	-11.8% [2]	12.0%	18.0%	6.0%
3	1990	-6.6%	-3.1%	3.4%	-4.1%	-0.9%	0.0%	0.0%	0.0%
4	1991	26.3%	30.4%	4.1%	17.6%	-12.8% [2]	12.0%	17.6%	5.6%
5	1992	4.5%	7.6%	3.2%	1.7%	-6.0%	4.5%	1.7%	-2.8%
6	1993	7.1%	10.1%	3.0%	5.7%	-4.4%	7.1%	5.7%	-1.4%
7	1994	-1.5%	1.3%	2.8%	0.3%	-1.0%	0.0%	0.3%	0.3%
8	1995	34.1%	37.5%	3.4%	20.8%	-16.7% [2]	12.0%	18.0%	6.0%
9	1996	20.3%	22.9%	2.6%	10.9%	-12.0% [2]	12.0%	10.9%	-1.1%
10	1997	31.0%	33.3%	2.3%	19.5%	-13.9% [2]	12.0%	18.0%	6.0%
11	1998	26.7%	28.6%	1.9%	13.0%	-15.5% [2]	12.0%	13.0%	1.0%
12	1999	19.5%	21.3%	1.8%	9.1%	-12.1% [2]	12.0%	9.1%	-2.9%
13	2000	-10.1%	-9.0%	1.1%	-2.7%	6.3% [3]	0.0%	0.0%	0.0%
14	2001	-13.0%	-11.9%	1.2%	-9.5%	2.3% [3]	0.0%	0.0%	0.0%
15	2002	-23.4%	-22.0%	1.4%	-13.1%	8.9% [3]	0.0%	0.0%	0.0%
16	2003	26.4%	28.4%	2.0%	11.0%	-17.4% [2]	12.0%	11.0%	-1.0%
17	2004	9.0%	10.7%	1.7%	2.9%	-7.9%	9.0%	2.9%	-6.1%
18	2005	3.0%	4.8%	1.8%	0.6%	-4.2%	3.0%	0.6%	-2.4%
19	2006	13.6%	15.6%	2.0%	6.6%	-9.0%	12.0%	6.6%	-5.4%
20	2007	3.5%	5.5%	2.0%	5.3%	-0.2%	3.5%	5.3%	1.8%
21	2008	-38.5%	-36.6%	1.9%	-16.0%	20.6% [3]	0.0%	0.0%	0.0%
22	2009	23.5%	25.9%	2.5%	6.2%	-19.7% [2]	12.0%	6.2%	-5.8%
23	2010	12.8%	14.9%	2.1%	2.4%	-12.4%	12.0%	2.4%	-9.6%
24	2011	0.0%	2.1%	2.1%	3.0%	0.9%	0.0%	3.0%	3.0%
25	2012	13.4%	15.8%	2.4%	11.5%	-4.3%	12.0%	11.5%	-0.5%
1988-2012									
Max		34.1%	37.5%	3.4%	20.8%	-16.7%	12.0%	18.0%	6.0%
Min		-38.5%	-36.6%	1.9%	-16.0%	20.6%	0.0%	0.0%	0.0%
Avg		8.8%	11.3%	2.5% [1]	5.3%	-6.0% [4]	7.3%	6.9%	-0.4%
Std Dev		17.7%	18.1%	0.4%	9.7%	-8.5% [5]	5.4%	6.5%	1.0% [7]
CAGR#		7.3%	9.7%	2.4% [1]	4.9%	-4.8% [4]	7.2%	6.7%	-0.5% [6]
2000-2012									
Max		26.4%	28.4%	2.0%	11.5%	-16.9%	12.0%	11.5%	-0.5%
Min		-38.5%	-36.6%	1.9%	-16.0%	20.6%	0.0%	0.0%	0.0%
Avg		1.5%	3.4%	1.9% [1]	0.6%	-2.8% [4]	5.8%	3.8%	-2.0%
Std Dev		18.6%	18.8%	0.3%	8.7%	-10.1% [5]	5.7%	4.1%	-1.6%
CAGR#		-0.2%	1.6%	1.9% [1]	0.3%	-1.4% [4]	5.7%	3.7%	-1.9% [6]

* Point-to-point - S&P 500 without dividends - 100% participation rate - 0% floor - 12% cap

** Point-to-monhtly average - S&P 500 with dividends - 100% participation rate - 0% floor - 18% cap

[#] Compound annual growth rate

[1] Over the last 13 to 25 years, dividends have provided approximately an additional 2.0% to 2.5% of cumulative annual yield

[2] Point-to-monthly average typically provides a large drag on performance during double digit growth years as compared to point-to-point

[3] Point-to-monthly average typically provides protective value during negative return years as compared to point-to-point

[4] Point-to-monthly average has provided an overall lower return over the last 25 years as compared to point-to-point

[5] Point-to-monthly average does provide lower volatilile annual returns as compared to point-to-point

[6] Standard index provides superior hypothetical historical returns over both 25 years and 13 years as compared to the alternative index

[7] Standard index is less volatile than the alternative index over the long term (25 year hypothetical historical returns)