Global Indexed Universal Life Insurance: Does This Policy Offer a Unique Investment to Investors?

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Abstract

Using a fifty year old non-smoking Texas male as a base, the new Global Indexed Universal Life insurance (GIUL) will be analyzed as not only a life insurance policy but an investment vehicle. The authors examine the distributions of the investment index adjusting for the cap limit of 13.25% on returns and the minimum return of 1% on the allocated proportion for the equity index formed by using the S&P 500, Euro STOXX 50 and the Hang Seng indices. The authors have found that for the base subject, the subject would be substantially better off on average choosing the traditional term insurance policy with the difference in premiums invested in the equity index without limiting caps based on the expected market average return of 8.91% for the three indices. The authors have found that the global index with limits can be an advantageous investment for certain investors based on the risk/return trade off due to the remarkable reduction in the co-efficient of variation and Sharpe's ratio as compared to other investment choices with the correlations of the three indices less than 1, the potential for reducing the risk/return trade-off is greater than the standard indexed universal life policy. Given that GIUL is a unique investment vehicle, the authors examine the potential tax advantages in retirement for a policy holder. The tax exempt status of loans made against the accumulated value would potentially allow investor to withdraw funds without paying taxes. The authors find the marginal amount need to offset this advantage with a traditional retirement vehicle like a mutual fund.

INTRODUCTION

The United States financial services sector was transformed by the investing concept of "buy term and invest the difference". Promoted by Andrew Tobias and by Arthur L. Williams, the buy term and invest the difference marketing strategy led to the "Term versus Permanent" war in insuarance. ALW sold almost $40 billion in term life insurance policies by 1984. This was more than any other company in the United States." (Hoe (2007), Tobias (2004), and Carr (2003)) "The hard divisions between compartments in the financial services world started to soften. Organizations devoted to investments, including Raymond James Financial and others, began to look at marketing both investments and life insurance products, while at the same time, life insurance companies began to think about selling investment products. The original business models for both investment sales and life insurance companies were becoming obsolete, although many in the industry didn't realize it until much later." (Hoe and Richard (2007))

Variable Universal Life (VUL) then became in the 1990s and early 2000s the new exciting product for the life insurance industry. (Glaspie (2006)) VUL is a combination of life insurance with a cash value portion invested in mutual funds. VUL became a market favorite as when the stock market was booming but when the stock market crashed in March of 2001, "the shining star dimmed." (Glaspie (2006))

In 1997, a new insurance product that was first developed – equity index universal life (EIUL). As a universal life insurance policy, EIUL provides a death benefit and cash value accumulation based on stock market indexes. Equity Index Universal life (EIUL) was a new product developed to meet the clients' investment needs and offer some protection from falling markets. What characterized it as "equity index" was the crediting of the cash value earnings. The cash value was not invested directly in stocks. The crediting method was based on the general performance of the stock market, represented by the S&P 500 index. Companies offering the product became creative in removing the downside risk of the stock market by guaranteeing a floor or minimum return. At the same time, upside returns were made attractive by establishing a higher cap. There were signs in the market that this product was really taking off fast. Annual sales nearly doubled from 2003 to 2005 (Moore. 2006). Regulators required the comopanies to drop the equity portion of the name due to not actually investing in stocks with cash value thus the Index Universal Life (IUL) was created. According to Advantage Group Associates Inc., a firm specializing in the analysis and monitoring of index life and annuity products, between 2003 and 2006, IUL sales increased more than 360 percent, closing with $338.2 million annual premium." (Howell (2008)) The VUL popularity fell as the stock market decreased, thus leading to the equity index universal life (EIUL) experiencing high growth.

Index Change for the July Segment =

$$\frac{(\text{S \& P 500 Closing Index on 7/1/2006}) - (\text{S \& P 500 Closing Index on 7/1/2005})}{(\text{S \& P 500 Closing Index on 7/1/2005})} \text{ X } 100$$

$$= \frac{(1280.19 \quad - 1194.44)}{(1194.44)} \text{ X } 100$$

$$= 7.18\ \%$$

Global Indexed universal Life (GIUL) was formed to help fill the needs of investors that are willing to tie their investments with their insurance. The advantage GIUL has is the minimum floor return guarantee of 1% for investors while giving up returns in excess of 13.25%. The floor guarantee is appealing in todays volitile and often poor market returns. A second adavntage is the switching of the S&P 500 index and Euro Stoxx 50 index where the higher return index is used for 50% of value assigned while the lower index gets 30%. This alternating of index choice causes investors to have a higher return on average.

The GIUL averages the S&P 500, Euro Stoxx 50 and Hang Seng. Hang Seng gets 20% weight. The higher return between S&P 500 and Euro Stoxx 50 gets 50% with lower getting 30%.

- Euro Stoxx 50 9.15% 50% = 4.575%
- S&P 500 7.18% 30% = 2.154%
- Hang Seng 10.5% 20% = 2.1%
  - GIUL's applied return 8.829%

This study investigated two important investment options faced by clients who want insurance with an investment. First, the authors compared if the traditional wisdom of buying a term life policy and investing the difference is more valuable to consumers than an equity index universal life policy. Second, the authors wanted to investigate further if GIUL, with downside and upside limits, has any hidden investment advantages that make it so popular in the market.

Figure 1 – Comparison of Coeffiecent of Variations

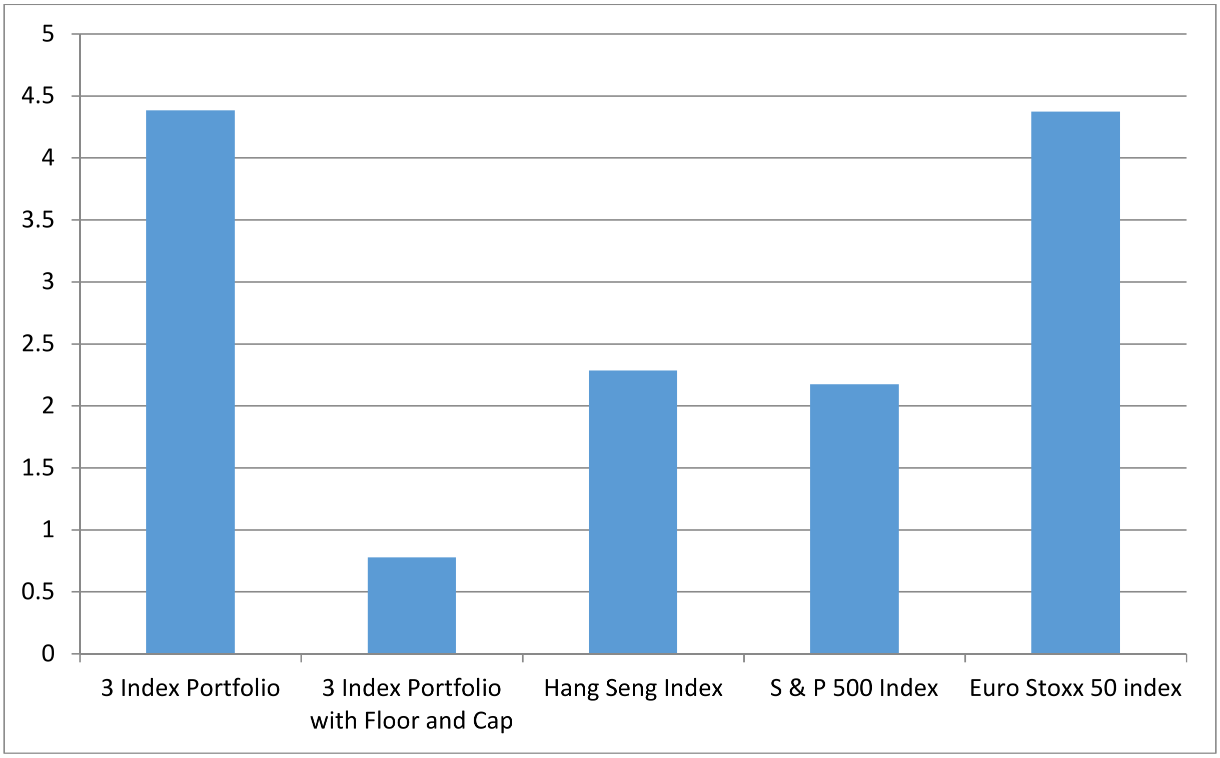

Figure 2 – Comparison of Sharpe's Ratios

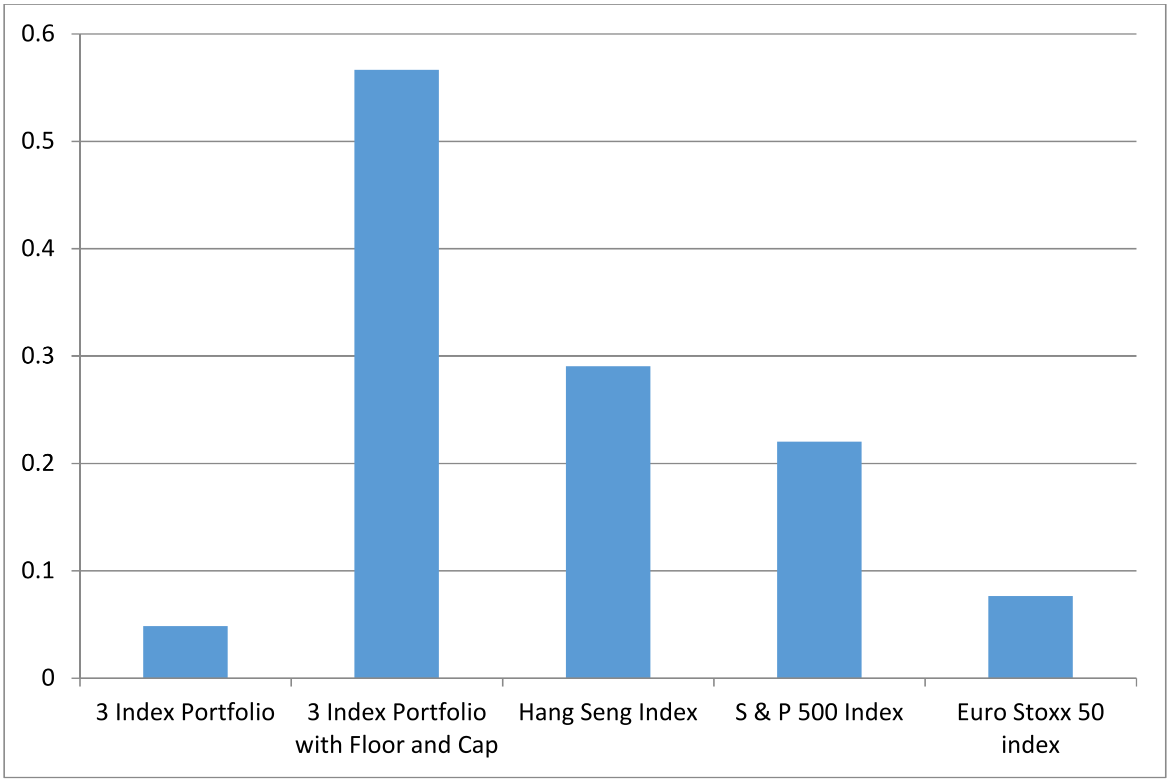

Figure 3 – Cumlative Returns

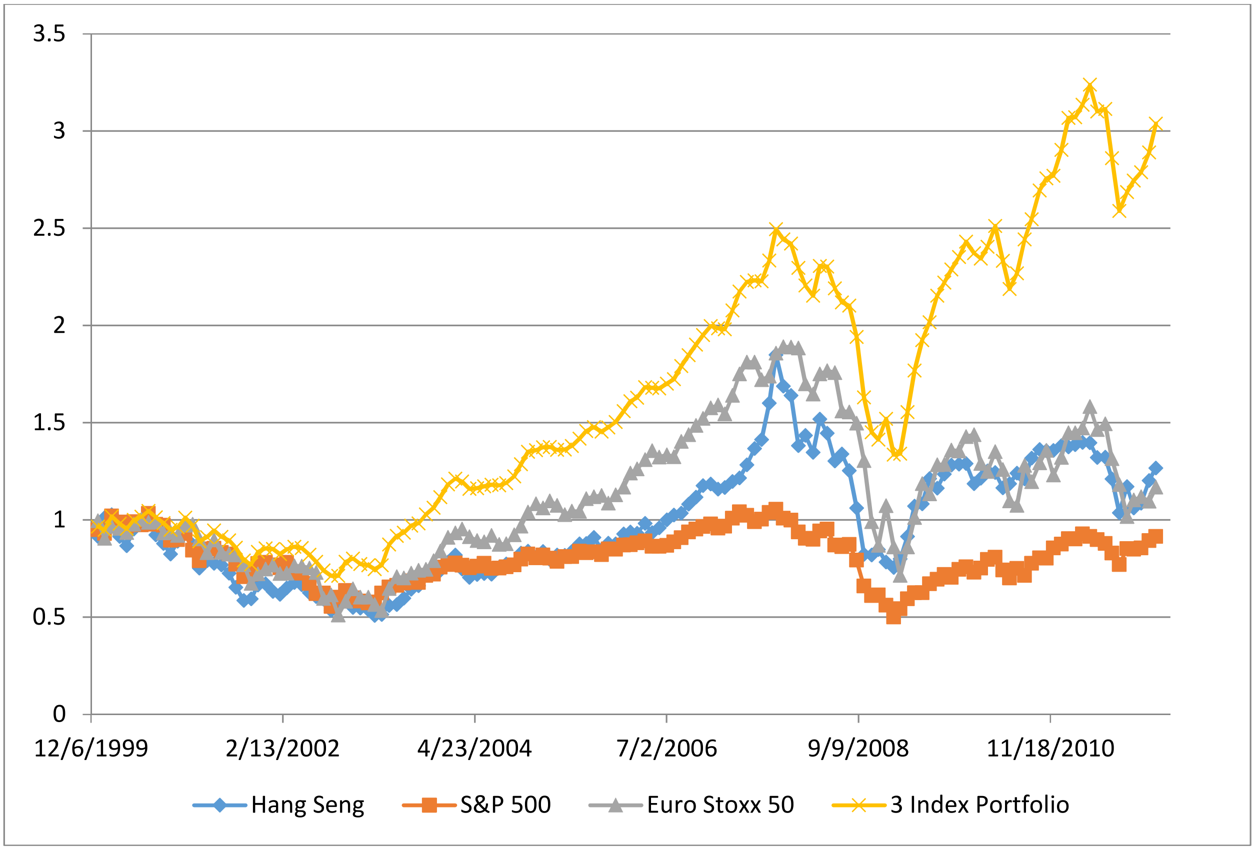

Table 1 – Excess Value from Investing Difference

Term Life Policy	Global Indexed Universal Life Policy	
Invested Excess Premium*	Cash Surrender Value	Value Difference
$ 7,149.74	$ -	$ 7,149.74
$ 14,963.19	$ -	$ 14,963.19
$ 23,501.96	$ 6,414.00	$ 17,087.96
$ 32,833.39	$ 13,503.00	$ 19,330.39
$ 43,031.06	$ 21,001.00	$ 22,030.06
$ 54,175.38	$ 31,339.00	$ 22,836.38
$ 66,354.23	$ 41,191.00	$ 25,163.23
$ 79,663.65	$ 51,469.00	$ 28,194.65
$ 94,208.58	$ 65,037.00	$ 29,171.58
$ 110,103.71	$ 78,883.00	$ 31,220.71
$ 127,474.40	$ 91,445.00	$ 36,029.40
$ 146,457.62	$ 104,602.00	$ 41,855.62
$ 167,203.04	$ 118,368.00	$ 48,835.04
$ 189,874.27	$ 132,773.00	$ 57,101.27
$ 214,650.08	$ 147,895.00	$ 66,755.08
$ 241,725.83	$ 163,711.00	$ 78,014.83
$ 271,315.02	$ 180,359.00	$ 90,956.02
$ 303,650.99	$ 197,873.00	$ 105,777.99
$ 338,988.71	$ 216,158.00	$ 122,830.71
$ 377,606.83	$ 235,038.00	$ 142,568.83

* Based on $571.87 invested at 8.91% APR

Table 2 – Correlations between S&P 500, Euro Stoxx 50 and Hang Seng

	Euro Stoxx	*S&P 500*	*Hang Seng*
Euro Stoxx	1		
S&P 500	0.61543755	1	
Hang Seng	0.82849027	0.6323611	1

Table 3 – Comparison of S&P 500, Euro Stoxx 50 and Hang Seng

	3 Index Portfolio	3 Index Portfolio with Floor and Cap	Hang Seng Index	S & P 500 Index	Euro Stoxx 50 index
Return	0.0526	0.0740	0.1230	0.0794	0.0621
STDEV	0.2304	0.0576	0.2811	0.1724	0.2716
CV	4.3827	0.7783	2.2854	2.1726	4.3719
Sharpe's	0.0485	0.5663	0.2903	0.2201	0.0763

Table 4 All Twelve Monthly Segment Cumulative Returns

	S&P 500 Return		IUL Return	
December	$	9.92	**$**	**10.38**
November	**$**	**10.33**	$	9.48
October	$	10.32	**$**	**10.51**
September	$	10.18	**$**	**10.80**
August	$	9.67	**$**	**9.75**
July	**$**	**9.34**	$	9.20
June	**$**	**9.51**	$	9.47
May	$	8.93	**$**	**9.38**
April	$	9.28	**$**	**9.88**
March	$	8.58	**$**	**9.64**
February	$	7.85	**$**	**9.91**
January	$	7.63	**$**	**10.04**

The authors find that in 9 out of the 12 the insurance has a higher cumulative value than the markets returns for 1980-2009.

Table 5 Average Yearly Returns for All Twelve Monthly Segments as defined by Indexed Universal Life insurance for 1951-2009

	1951-2009 S&P 500	1951-2009 IUL
Monthly Segment	Average Return	Average Return
December	8.19%	7.77%
November	8.47%	7.60%
October	8.42%	7.82%
September	8.26%	7.92%
August	8.59%	7.59%
July	8.41%	7.48%
June	8.36%	7.33%
May	8.21%	7.28%
April	7.97%	7.41%
March	7.96%	7.02%
February	8.07%	7.30%
January	7.82%	7.34%

Table 6 T-Stats for Comparisons of Means for All Twelve Monthly Segments for 1980-2009 versus the 1951-2009

Monthly Segment	1980-2009
December	0.735
November	0.775
October	0.773
September	0.761
August	0.839
July	0.836
June	0.794
May	0.829
April	0.758
March	0.806
February	0.83
January	0.833

This table shows that there is no statistically significant difference in the means for any period or segment.

Table 7 T-Test: Paired Two Sample for Means 1951-2009

	S&P yearly	*IUL Returns*
Mean	0.0823	0.0749
Variance	0.0269	0.0026
Observations	708	708
Pearson Correlation	0.8667	
Hypothesized Mean Difference	0	
df	707	
t Stat	1.6049	
P(T<=t) one-tail	0.0545	
t Critical one-tail	1.6470	
P(T<=t) two-tail	0.1090	
t Critical two-tail	1.9633	

This shows that there is not a statically significant difference in the means for the monthly segment yearly returns for the IUL versus the yearly returns for the S & P 500.

Table 8 The Number of Upper Caps and Lower Limits applied by Indexed Universal life for 1951-2009 & 1980-2009

Monthly Segment	1951-2009 IUL Number of Upper 12.5% Limit Applied	1951-2009 IUL Number of Lower 1% Limit Applied
December	20	17
November	26	18
October	26	20
September	25	17
August	24	19
July	23	19
June	24	18
May	24	19
April	23	17
March	23	18
February	23	19
January	19	17
Total	280	218

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