# Life Insurance - Case Study

Guaranteed UL vs Whole Life vs Interest Income



Dec 08, 2022

#### Attn: Valued Client / Private & Confidential

Re: Life Insurance Comparative Analysis

### **Case Summary**

The client requires \$1M of after-tax liquidity (net-to-estate) for tax purposes.

#### **Assumptions**

- The client is a 62-year-old male, non-smoker, in good health.
- The client's spouse is a 60-year-old female, non-smoker, and in good health.
- The ownership is set as a CCPC Holding Co.
- The clients benefit from a potential spousal rollover.
- The estate planning timeline is set to year 28, the client's spouse's age 88.

This requirement is addressed through illustrations applying the following strategies:

- 1) A Joint-Life Guaranteed Universal Life policy (GUL)
- 2) A Joint-life Participating Whole Life policy (PAR) at 6% and 5%
- 3) Interest Income at a guaranteed 7% income rate

To cross-evaluate these strategies and provide a meaningful comparison, the cash flow output for each illustration is set as the same. The strategies can thus be evaluated based on each strategy's net-to-estate benefit based on an <u>equal cash output</u>.

Additionally, any other relevant pros and cons are noted.

Note: for these illustrations, the currency is ignored. This allows premium and face value to be adjusted in a linear way, as required



### Strategy 1: Guaranteed Survivorship Life Insurance

A Guaranteed Survivorship Universal Life (GUL) policy is a simple, permanent joint-life insurance product with a guaranteed premium schedule and a guaranteed, level lifetime face value. The product is <u>fully guaranteed for life</u> and has <u>no variability</u>.

The GUL we are presenting is a Survivorship UL provided by an A+ rated US Carrier. The plan provides a \$1M guaranteed face and has a premium schedule of  $15 \times \$17,611$  (see attach 1).

#### **Survivorship GUL Strategy Summary**

• Guaranteed premium schedule: 15 x \$17,611

• Guaranteed level lifetime face value: \$1,000,000

The policy yields a 14% pre-tax equivalent Internal Rate of Return (IRR) at year 28.

#### **Pros**

- Fully guaranteed death benefit
- Fixed premium schedule and low overall cost that meets the client's after-tax needs
- High level of death benefit available from Day 1
- High after-tax equivalent IRR, to age 100 and beyond
- Tax-free liquidity without any market timing risk
- A "non-correlated asset" independent of market performance
- Offers safe estate hedge against forced asset liquidation
- Eliminates unwanted taxation of corporate assets

#### Cons

- The policy lacks meaningful access to cash value
- Funds deposited cannot be accessed via loans or withdrawals
- The strategy's full estate benefit is to the next generation rather than to the client

Note: As a point of reference, an equivalent \$1M joint-life guaranteed UL policy from a Canadian carrier (ex. Sun Life Limited 15 pay UL) will have a premium schedule of \$25,844 x 15



### Strategy 2: Whole Life Participating Insurance

A Participating Whole Life policy combines a life policy with an additional "overfunding" deposit. The overfunded portion is invested into a "participating fund," generating dividends. These dividends can accrue tax-free, growing the policy's overall death benefit. The policy performance is illustrated using a Dividend Scale Interest Rate (DSIR). This rate impacts the policy's face value. Performance is not guaranteed. Other factors such as mortality and expenses also contribute.

This analysis uses Sun Life's Par Protector II, one of the strongest Whole Life products on the market. The policy's current DSIR is 6%. Our illustration structures the Whole Life policy at the current 6% rate (see attached 2), and, for comparison, at the current -1%, (i.e. 5%, attached 3).

The Whole Life policy will have the same premium schedule as the UL above, i.e. **15 x \$17,611**. Performance is optimized by maximizing the "overfunding" ratio (\$7,675 premium + \$9,936 overfunded). The policy's non-guaranteed growth is detailed below.

#### Whole Life Strategy Summary

• Total deposit schedule: 15 x \$17,611

• Guaranteed lifetime face value: \$230,221

#### Policy performance (net-to-estate)

Year	$\mathbf{Ages}$	Policy Value @ 6%	Policy Value @ 5%
1	63/61	\$246,644	\$246,402
10	72/70	\$416,254	\$400,544
20	82/80	\$614.816	\$535,487
30	92/90	\$887,487	\$693,171

By year 28, at 6%, the policy face would yield \$814,707, and at 5% it would only yield \$649,574.

#### **Pros**

• The policyholder can access a portion of the growing cash surrender value on a tax-free basis via collateralized loans (subject to annually renewable borrowing rates).

#### Cons

• The illustration's <u>face value is insufficient</u> for meeting the client's full estate planning needs of \$1M for the entirety of the clients' expected lifespan.



### Strategy 3: Interest Income ("Retaining the Risk")

For comparison, the Interest Income strategy will deposit the same annual \$17,611 x 15, into a 7% corporately held interest income fund. Any annual corporate after-tax income is reinvested back into the fund for continued growth. The Refundable Dividend Tax on Hand (RDTOH) is tracked to provide an annual "net-to-estate" after-tax value for any given year (see attach 4).

#### **Interest Income Strategy Summary**

• Total investment deposits: 15 x \$17,611

• Annual interest income rate: 7%

#### Investment performance (net-to-estate)

Year	$\mathbf{Ages}$	Net Value @ 7%
1	63/61	\$11,142
10	72/70	\$141,832
20	82/80	\$306,143
30	92/90	\$471,174

At year 28, the fund's net after-tax value would be \$433,493.

At a rate of 7%, this fund would only yield \$1M net to the estate by the insureds ages 112 & 110. In fact, to yield \$1M by year 28, an average annual interest income rate of 14% would be required. Even if this were achievable, the fund would still be below \$1M for the first 27 years!

#### **Pros**

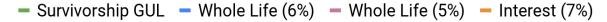
- The client is in control of his funds and can access his funds at any time.
- It offers added value beyond age 88 if interest income rates reach 14% on average.

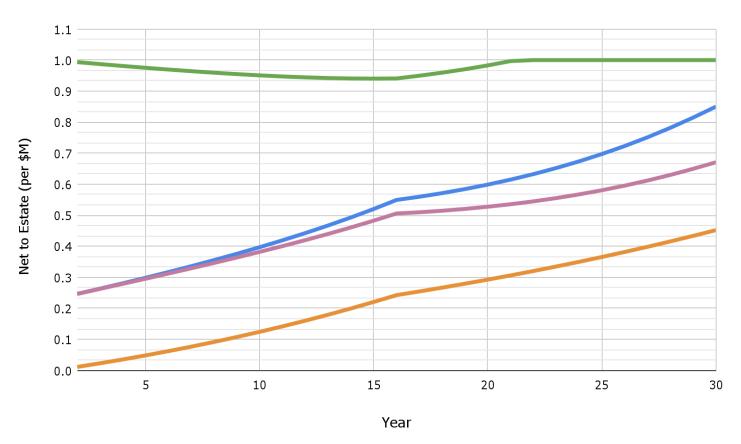
#### Cons

- The interest income is subject to <u>annual income tax</u> and falls far below the client's full \$1M needs for estate planning.
- The investment is slow growing and <u>requires larger annual investments</u> to reach a \$1M after-tax value for estate planning.
- The strategy does not provide tax-free liquidity for estate planning.

### **Net To Estate Summary Table**

Performance summary of each strategy given an input of \$17,611 x 15





### **Conclusion**

Of the above-illustrated strategies, the GUL strategy best meets the client's estate planning needs. A GUL offers <u>full net-to-estate benefits</u> through a low-cost and low-risk strategy that provides intergenerational wealth preservation/creation.

Providing a pre-tax equivalent IRR of 14% at life expectancy, the illustrated GUL offers excellent value for estate planning and beyond.

## **Attachement 01 - Guranteed Survivorship UL**

Policy Rate:	1%	Guar	Corp Income Tax Rate	50.17%
Base Premium:	\$17,611	USD	Dividend Tax Rate	40.11%
Life Expectancy	Age 88	(Yr 28)	Pre Tax IRR Age 88 (Y28)	14.0%

	SCENARIO: EXEMPT LIFE INUSRANCE POLICY (Guaranteed Rate)							
Year	Age	Annual Deposit	Total Cash Value (CSV)	Total Death Benefit	Policy ACB*	CDA Credit*	Net To Estate Value	After Tax IRR
1	63/61	\$17,611	_	\$1,000,000	\$16,361	\$983,639	\$993,438	5541.01%
2	64/62	17,611	_	1,000,000	32,092	967,908	987,128	600.35%
3	65/63	17,611	_	1,000,000	47,273	952 <b>,</b> 727	981,039	243.36%
4	66/64	17,611	_	1,000,000	61,864	938,136	975,186	140.27%
5	67/65	17,611	-	1,000,000	75 <b>,</b> 795	924,205	969,599	94.35%
6	68/66	17,611	_	1,000,000	88,966	911,034	964,316	69.09%
7	69/67	17,611	_	1,000,000	101,267	898,733	959,382	53.36%
8	70/68	17,611	_	1,000,000	112,568	887,432	954,849	42.74%
9	71/69	17,611	_	1,000,000	122,699	877 <b>,</b> 301	950,785	35.15%
10	72/70	17,611	-	1,000,000	131,480	868,520	947,263	29.48%
11	73/71	17,611	_	1,000,000	138,691	861,309	944,371	25.12%
12	74/72	17,611	_	1,000,000	144,092	855,908	942,205	21.68%
13	75/73	17,611	_	1,000,000	147,540	852 <b>,</b> 460	940,822	18.90%
14	76/74	17,611	_	1,000,000	148,762	851,238	940,331	16.62%
15	77/75	17,611	-	1,000,000	147,415	852,585	940,872	14.74%
16	78/76	-	_	1,000,000	125,460	874,540	949,678	13.44%
17	79/77	_	_	1,000,000	100,935	899,065	959,515	12.37%
18	80/78	_	_	1,000,000	73,471	926,529	970,531	11.46%
19	81/79	_	_	1,000,000	42,650	957,350	982,893	10.70%
20	82/80	-	-	1,000,000	7,971	992,029	996,803	10.04%
21	83/81	-	_	1,000,000	-	1,000,000	1,000,000	9.39%
22	84/82	_	_	1,000,000	_	1,000,000	1,000,000	8.80%
23	85/83	_	_	1,000,000	_	1,000,000	1,000,000	8.28%
24	86/84	_	_	1,000,000	_	1,000,000	1,000,000	7.81%
25	87/85	-	-	1,000,000	-	1,000,000	1,000,000	7.39%
26	88/86	-	_	1,000,000	-	1,000,000	1,000,000	7.02%
27	89/87	_	_	1,000,000	-	1,000,000	1,000,000	6.68%
28	90/88	-	-	1,000,000	-	1,000,000	1,000,000	6.37%
29	91/89	-	-	1,000,000	-	1,000,000	1,000,000	6.08%
30	92/90	-	-	1,000,000	-	1,000,000	1,000,000	5.82%
31	93/91	-	_	1,000,000	-	1,000,000	1,000,000	5.58%
32	94/92	_	_	1,000,000	_	1,000,000	1,000,000	5.36%
33	95/93	_	_	1,000,000	_	1,000,000	1,000,000	5.16%
34	96/94	_	_	1,000,000	_	1,000,000	1,000,000	4.97%
35	97/95	-	-	1,000,000	-	1,000,000	1,000,000	4.79%
36	98/96	-	_	1,000,000	-	1,000,000	1,000,000	4.63%
37	99/97	_	_	1,000,000	_	1,000,000	1,000,000	4.48%
38	100/98	_	_	1,000,000	_	1,000,000	1,000,000	4.33%
39	101/99	_	_	1,000,000	-	1,000,000	1,000,000	4.20%
40	102/100	-	-	1,000,000	-	1,000,000	1,000,000	4.07%
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#### **Armstrong Financial Services Inc.**

Client 62M NS Pref & 60F NS Pref

\$264,165

Face \$1,000,000

E&OE 12/7/2022 \* Estimated, TBD

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## Attachement 02 - Sun Whole Life Par (6%)

Policy Rate:	6%	Non-Guar	Corp Income Tax Rate	50.17%
Base Premium:	\$7 <b>,</b> 675	CAD	Dividend Tax Rate	40.11%
Life Expectancy	Age 88	(Yr 28)	Pre Tax IRR Age 88 (Y28)	12.2%

SCENARIO: EXEMP	「LIFE INUSRANCE POLICY (	(Current Rate)
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Year	Age	Annual Deposit	Total Cash Value (CSV)	Total Death Benefit	Policy ACB	CDA Credit	Net To Estate Value	After Tax IRR
1	63/61	<b>\$17,611</b>	\$8,999	\$253,618	<b>\$17,</b> 337	\$236 <b>,</b> 281	\$246,664	1300.62%
2	64/62	17,611	18,720	277,356	34,525	242,831	263,508	240.03%
3	65/63	17,611	29,211	301,481	51 <b>,</b> 577	249,904	280,793	110.94%
4	66/64	17,611	40,518	326,033	68 <b>,</b> 477	257 <b>,</b> 556	298,567	67.19%
5	67/65	17,611	54,100	351,076	85,201	265,875	316,902	46.25%
6	68/66	17,611	69,202	376,641	101,725	274,916	335,839	34.32%
7	69/67	17,611	87,907	402,791	118,014	284,777	355,456	26.77%
8	70/68	17,611	108,916	429,596	134,029	295,567	375,837	21.66%
9	71/69	17,611	132,320	457,124	149,729	307,395	397,068	18.02%
10	72/70	17,611	158,226	485,460	165,061	320,399	419,254	15.34%
11	73/71	17,611	186,737	514,717	179,967	334,750	442,532	13.30%
12	74/72	17,611	217,942	544,982	194,378	350,604	467,017	11.73%
13	75/73	17,611	251,943	576 <b>,</b> 377	208,216	368,161	492,862	10.49%
14	76/74	17,611	288,840	609,040	221,392	387,648	520,240	9.50%
15	77/75	17,611	328,725	643,108	233,805	409,303	549,329	8.71%
16	78/76	_	345,538	651,006	227,926	423,080	559,585	8.03%
17	79/77	-	363,270	660,090	221,522	438,568	571,237	7.50%
18	80/78	_	381,950	670,343	214,553	455 <b>,</b> 790	584,286	7.06%
19	81/79	_	401,629	681,804	206 <b>,</b> 972	474 <b>,</b> 832	598 <b>,</b> 787	6.71%
20	82/80	-	422,380	694,528	198,733	495,795	614,816	6.42%
21	83/81	-	444,241	708,657	189,789	518,868	632,533	6.18%
22	84/82	-	467,247	724 <b>,</b> 345	180,091	544 <b>,</b> 254	652,110	5.99%
23	85/83	-	491,442	741 <b>,</b> 662	169,584	572 <b>,</b> 078	673,642	5.83%
24	86/84	-	516,851	760,701	158,219	602,482	697,239	5.70%
25	87/85	-	543 <b>,</b> 525	781,574	145,941	635,633	723,037	5.59%
26	88/86	-	571,501	804,369	132,695	671,674	751,145	5.51%
27	89/87	-	600,835	829,206	118,425	710,781	781 <b>,</b> 706	5.44%
28	90/88	-	631,494	856,051	103,076	752,975	814,707	<b>5.38</b> %
29	91/89	-	663,341	884,743	86,597	798,146	850,009	5.34%
30	92/90	-	696,230	915,140	68,942	846,198	887,487	5.30%
31	93/91	-	730,142	947,028	50,071	896,957	926,944	5.26%
32	94/92	-	773,622	979,171	29,966	949,205	967,152	5.23%
33	95/93	-	818,420	1,011,638	8,620	1,003,018	1,008,180	5.19%
34	96/94	-	864,393	1,044,210	-	1,044,210	1,044,210	5.13%
35	97/95	-	911,397	1,076,687	-	1,076,687	1,076,687	5.06%
36	98/96	-	959,240	1,108,772	-	1,108,772	1,108,772	4.99%
37	99/97	_	996,942	1,141,495	_	1,141,495	1,141,495	4.92%
38	100/98	-	1,035,325	1,174,667	-	1,174,667	1,174,667	4.86%
39	101/99	-	1,074,620	1,208,381	-	1,208,381	1,208,381	4.80%
40	102/100	-	1,114,914	1,242,440	-	1,242,440	1,242,440	4.74%

\$264,166

#### **Armstrong Financial Services Inc.**

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## Attachement 03 - Sun Whole Life Par (5%)

Policy Rate:	5%	Non-Guar	Corp Income Tax Rate	50.17%
Base Premium:	\$7 <b>,</b> 675	CAD	Dividend Tax Rate	40.11%
Life Expectancy	Age 88	(Yr 28)	Pre Tax IRR Age 88 (Y28)	10.3%

	SCENARIO: EXEMPT LIFE INUSRANCE POLICY (Current Rate - 1)								
Year	Age	Annual Deposit	Total Cash Value (CSV)	Total Death Benefit	Policy ACB	CDA Credit	Net To Estate Value	After Tax IRR	
1	63/61	\$17,611	\$8,898	\$253 <b>,</b> 356	<b>\$17,</b> 337	\$236,019	\$246,402	1299.13%	
2	64/62	17,611	18,375	276,488	34,526	241,962	262,640	239.40%	
3	65/63	17,611	28,464	299 <b>,</b> 658	51,581	248,077	278 <b>,</b> 969	110.38%	
4	66/64	17,611	39,200	322,917	68,486	254,431	295,447	66.62%	
5	67/65	17,611	52,021	346,309	85,219	261,090	312,127	45.65%	
6	68/66	17,611	66,155	369,861	101,757	268,104	329,046	33.68%	
7	69/67	17,611	83,665	393,627	118,067	275,560	346,271	26.10%	
8	70/68	17,611	103,233	417,672	134,115	283,557	363,879	20.94%	
9	71/69	17,611	124,929	442,052	149,862	292,190	381,942	17.27%	
10	72/70	17,611	148,833	466,830	165,260	301,570	400,544	14.54%	
11	73/71	17,611	175,023	492,105	180,256	311,849	419,804	12.47%	
12	74/72	17,611	203,564	517,950	194,790	323,160	439,820	10.86%	
13	75/73	17,611	234,526	544 <b>,</b> 457	208 <b>,</b> 791	335,666	460,711	9.59%	
14	76/74	17,611	267,980	571 <b>,</b> 744	222,181	349,563	482,627	8.58%	
15	77/75	17,611	303,982	599,906	234,873	365,033	505,698	7.76%	
16	78/76	_	316,585	601,590	229,351	372,239	509 <b>,</b> 597	7.06%	
17	79/77	_	329,747	604,121	223,383	380,738	514,522	6.50%	
18	80/78	_	343,481	607,478	216,940	390,538	520,463	6.05%	
19	81/79	_	357,813	611,670	209,988	401,682	527,444	5.68%	
20	82/80	-	372,778	616,708	202,496	414,212	535,487	5.38%	
21	83/81	_	388,393	622,714	194,433	428,281	544,727	5.13%	
22	84/82	_	404,652	629,795	185,766	444,029	555,284	4.93%	
23	85/83		421,564	637,982	176,461	461,521	567,203	4.76%	
24	86/84	_	439,116	647,328	166,487	480,841	580,550	4.62%	
25	87/85	_	457,323	657,901	155,811	502,090	595,405	4.51%	
26	88/86	_	476,180	669,750	144,401	525,349	611,831	4.42%	
27	89/87	-	495,697	682,936	132,225	550,711	629,900	4.35%	
<b>28</b>	90/88	-	<b>515,812</b>	697,407	<b>119,254</b>	<i>578,153</i>	649,574	4.30%	
29 30	91/89 92/90	-	536,385 557,273	713,004 729,602	105,462 90,827	607,542 638,775	670,703 693,171	4.25% 4.21%	
						·			
31	93/91	_	578,456	746,991	75,335	671,656	716,774	4.18%	
32	94/92	-	606,023	764,232	58,987	705,245	740,572	4.15%	
33	95/93	-	633,940	781,372	41,795	739,577	764,608	4.11%	
34	96/94	-	662,104	798,279	23,772	774,507	788,744	4.08%	
35	97/95	-	690,397	814,802	4,943	809,859	812,819	4.04%	
36	98/96	-	718,671	830,728	-	830,728	830,728	3.98%	
37	99/97	-	739,482	846,750	-	846,750	846,750	3.91%	
38	100/98	-	760,288	862,713	-	862,713	862,713	3.85%	
39	101/99	-	781,227	878,659	-	878,659	878,659	3.79%	
40	102/100	-	802,338	894,433	-	894,433	894,433	3.73%	

#### **Armstrong Financial Services Inc.**

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**After Tax** 

### **Attachement 04 - Regular Interest Income at 7%**

SCENARIO: COMPUNDED INTEREST INCOME FUND

**Accumulation** 

**RDTOH** 

**Declared** 

Income

Interest Income Rate 7.0% Non-Guar
IRR Age 88 (Year 28) 2.36% (After Tax)

Annual

**Taxable** 

33,486

34,654

35,863

37,114

38,408

39,748

41,135

42,569

44,054

45,591

47,181

48,827

50,530

52,293

54,117

56,004

16,800

17,386

17,992

18,620

19,270

19,942

20,637

21,357

22,102

22,873

23,671

24,496

25,351

26,235

27,150

28,097

Income Tax Rate 50.17% Dividend Tax Rate 40.11%

**Net To** 

#### Year Age Deposit (B) Income (C) Tax (D) Value (E) Credit (F) Dividend(G) Estate (H) **IRR** (B x 7.0%) (C x 50.17%) (B+C-D) (C x 30.67%) (G - 40.11%) \$17,611 1 63/61 \$1,233 \$618 \$18,225 \$378 \$18,603 \$11,142 -36.74% 2 64/62 17,611 2,509 1,259 37,086 1,147 38,234 22,898 -25.49% 17,611 3 65/63 3,829 1,921 56,605 2,322 58,927 35,291 -18.86% 4 66/64 17,611 5,195 2,606 76,805 3,915 80,720 48,343 -14.51% 5 67/65 17,611 6,609 3,316 97,709 5,942 103,651 62,077 -11.43% 6 68/66 17,611 8,072 4,050 119,343 8,418 127,761 76,516 -9.16% 7 17,611 9,587 4,810 153,089 91,685 69/67 141,731 11,358 -7.41% 8 17,611 5,596 14,779 179,679 70/68 11,154 164,900 107,610 -6.02% 9 71/69 17,611 12,776 6,410 188,877 18,697 207,574 124,316 -4.90% 10 72/70 17,611 14,454 7,252 213,690 23,131 236,821 141,832 -3.98% 11 73/71 17,611 16,191 8,123 239,370 28,096 267,466 160,185 -3.20% 9,025 17,611 17,989 265,944 33,613 299,558 179,405 12 74/72 -2.55% 13 75/73 17,611 19,849 9,958 293,446 39,701 333,147 199,522 -1.99% 14 76/74 17,611 21,774 10,924 321,907 46,379 368,286 220,567 -1.50% 15 77/75 17,611 23,766 11,924 351,361 53,668 405,029 242,572 -1.07% 24,595 12,339 61,212 424,828 254,430 -0.42% 16 78/76 363,616 25,453 12,770 69,018 266,701 17 79/77 376,300 445,318 0.10% 26,341 13,215 389,425 77,097 466,522 279,400 18 80/78 0.51% 19 81/79 27,260 13,676 403,009 85,457 488,466 292,543 0.85% 511,176 20 28,211 94,110 306,143 82/80 14,153 417,066 1.13% 14,647 21 83/81 29,195 431,614 103,064 534,678 320,219 1.37% 84/82 30,213 15,158 446,669 112,330 558,999 334,785 1.58% 22 23 85/83 31,267 15,687 462,249 121,920 584,169 349,859 1.75% 24 86/84 32,357 16,234 478,373 131,844 610,217 365,459 1.91%

495,059

512,327

530,198

548,692

567,831

587,637

608,135

629,347

651,299

674,017

697,528

721,858

747,037

773,095

800,061

827,968

142,114

152,742

163,741

175,124

186,904

199,095

211,711

224,767

238,278

252,261

266,731

281,707

297,204

313,242

329,840

347,016

\$264,165

#### **Armstrong Financial Services Inc.**

Client 62M NS Pref & 60F NS Pref

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87/85

88/86

89/87

90/88

91/89

92/90

93/91

94/92

95/93

96/94

97/95

98/96

99/97

100/98

101/99

102/100

Presented by: David Emmanuel Kakon, Math B.Sc.

Telephone: (888) 603-5500 / Fax (514) 447-1804

637,173

665,070

693,939

723,816

754,735

786,732

819,845

854,114

889,577

926,278

964,259

1,003,565

1,044,241

1,086,337

1,129,901

1,174,984

381,603

398,310

415,600

433,493

452,011

471,174

491,005

511,529

532,768

554,748

577,495

601,035

625,396

650,607

676,698

703,698

2.04%

2.16%

2.27%

2.36%

2.45%

2.52%

2.59%

2.65%

2.71%

2.76%

2.81%

2.85%

2.89%

2.92%

1.18%

2.99%

Email: David@ArmstrongLife.net