

# **Misconceptions about Protected Withdraw Value Annuities**

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*Protected Withdraw Value Variable Annuities, with its promises of income for life, have attracted many investors. A financial planner once called Protected Variable Annuity “Too good to be true.” It is true, but it is not necessarily good. There have actually been plenty of complaints regarding protected annuities, filed with the US Securities Exchange Commission. Assuming that you invested in a protected, and a un-protected, variable annuities thirty years ago, given the actual market performance during the past 30 years, you are now in a position to evaluate and compare the performance of the protected and non-protected variable annuities. This paper will show that in many cases the non-protected annuities are actually better than the protected ones. This paper will also point out some misconceptions about protected variable annuities.*

## **1. Introduction**

Protected Withdraw Value Variable Annuities are very appealing to retiring investors. Banks and Insurance companies are pushing hard to sell them. As agents will tell you, your annuity income would only increase but would never decrease. As there are many different protected variable annuities, in order to be specific, this paper will only be discussing about one specific product offered in a booklet from the Prudential Insurance Company (Prudential Financial Inc., 2013). The costs, fees, and the rules used in the discussion will all be based on the product offered by Prudential Financial.

Most people will be impressed if they see the promotional booklet of the protected withdraw value variable annuity from Prudential Insurance (Figure 1).

Here are some of the highlights that are quoted from the promotional booklet.

1. Every day that your annuity reaches a new high, that amount is locked for retirement income purposes and immediately begins growing at an annual 5% compounded rate.
2. Your highest lock-in amount plus 5% compounded growth is your PWV (Protected Withdraw Value).
3. The 5% compounded growth continues up to and including the 10<sup>th</sup> anniversary, or until you begin Lifetime Withdrawals, whichever is sooner.

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4. After 10<sup>th</sup> Benefit Anniversary, Highest Daily Lifetime income benefits will continue to lock in your annuity's highest daily value as your PWV, until you begin taking Lifetime Withdraws. At this point, the 5% compounded growth rate is no longer applied to your PWV.

It is understood that with a non-protected variable annuity, your monthly annuity income is a fixed percent of your account value, while with protected variable annuity your income is a fixed percent of the so called "Protected Withdraw Value (PWV)." If your annuity is not protected, since account value goes up and down with the market, your income will also goes up and down. On the other hand, with the protected annuity, since your protected withdraw value (PWV) can only go up, and would never go down, your annuity income will also only go up and never go down. Initially, your account value and the PWV are the same. They move in different directions later on according to the market.

The idea of protecting you income is appealing. However there exist very serious disadvantage that most people, including professionals, do not realize.

Not all annuity products are the same. You can't find a single product which is suitable for all people, and there is not a single product that is bad for all people. Whether a product is considered desirable depends on the markets, on the economy and on the individual. This paper will discuss the protected annuity product offered by Prudential Insurance Company, which represents a large group of annuity product, to point out a general misconception about most of the protected variable annuities.

This paper will compare protected withdraw value variable annuity with the non-protected variable annuity, using real life market data from the past thirty years, and to point out some common misconceptions, even by professionals, about protected variable annuity.

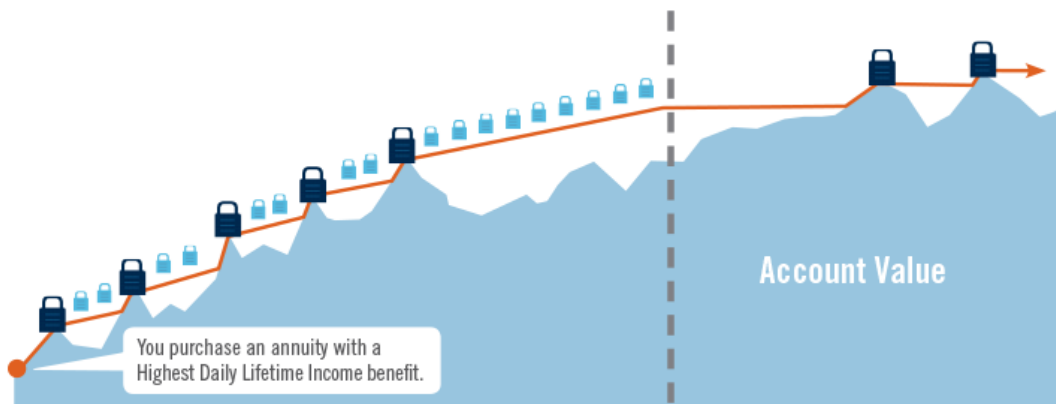
The outline of this paper is as follows: Immediately after literature review in section two, we will, in section 3, discuss methodology of the paper, which, in brief, is to use Dow Jones Indices of past 360 months to simulate, and to compare, performance of different kind of annuities. In section 4 we will use calculated results and tables to point out what the misconceptions are. We will also point out that, even without a fee, the protected annuities are not any better than unprotected annuities in many cases. Section 5 is the conclusion.

## 2. Literature Review

The Protected Withdraw Value Variable Annuity, as promoted in the company's booklet titled "*Destination: Retirement Income*",(Provincial Financial Inc. 2013), is well explained in figure 1 below.

Figure 1 below is quoted from the promotional booklet. It looks appealing, but there is a potential misconception that needs to be pointed out.

**Figure 1: Protected Withdraw Value vs Actual Account Value**



The segmented straight line in Figure 1 (on top of the area chart) represents the so called “Protected Withdraw Value (PWV)”. Your annual annuity income is 5% of the PWV. The percentage may vary depending on your age. On the left side of figure is the “Accumulation Period.” During the accumulation period, you are not allowed to withdraw any income. However if you are retiring soon, the accumulation period will not be suitable for you and you will start to withdraw immediately. This is also the assumption of this paper.

From Figure 1, it is clear that the segmented PWV lines do not move downward, hence your annuity income, which is 5% of the PWV, will not go down. It sounds good. However, using numbers and figures, we can prove that some of the common “understandings” about protected variable annuities are actually misunderstandings.

Figure 1 is a very misleading figure, as you will find out later in this paper.

There have been papers discussing Protected Variable Annuities. In the paper entitled ‘ Variable Annuities: Helping Clients Get the Picture; Best Practices for Financial Advisors’, (Serrano, J M, 2012), Serrano pointed out eight misconceptions about protected variable annuities. Among them:

**Misconception #1: Retain control of the Assets:**

The truth is: Once annuitized you no longer have control of your assets.

**Misconception #2: Can withdraw the guaranteed income benefit:**

The truth is: If the contract has not been annuitized, and are allowed for the client to surrender the contract, they would only receive the account balance, net of deferred sales charge, instead of the guaranteed Income benefit.

**Misconception #3: Investment Returns cover product fee:**

The truth is: There no guarantee that market returns on investments will keep up with the fees in the product.

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Misconceptions #4: My withdraw amount will never decline:

The truth is: Once the contract must be annuitized, the payout percentage may be based on the annuitant's age, the spouse's age or even rolled back to the age at which they began making withdraw.

In the end, Mr. Serrano also said that with cautions and complete understanding of the details, the protected annuity could be a very good investment. In fact Mr. Serrano pointed out in his paper that **"If this contract guaranteed the annual payment for it, this might be a superior choice over a similar investment strategy undertaken outside of an annuity with no fees."** (Serrano, J.M., 2012)

In this paper we will discuss the Protected Withdraw Value Variable Annuity from Prudential Insurance. In the cases which will be discussed in this paper, none of the above misconception applies. As you will see, the payout percentage never change, the "annuitization" process started right at the very beginning of the contract, the fees are lower, and the payout runs for the full term of the contract without any change or interruption.

However, what this paper will point out is that, even without any of the misconception mentioned, and having a complete understanding of the protected annuity, the guaranteed variable annuity is still not that such a good idea, as most people believe. This is contrary to Mr. Serrano's conclusion. In fact, we can prove that his final statement, as quoted above, is in itself a misconception.

In fact, there have been plenty of discussions regarding this particular product from Prudential Insurance. In his article, titled 'Variable annuity fees: Devil's in the detail', (Cruz, H. 2009), Cruz said "From experience I believe variable annuities with minimum withdrawal guarantees and modest fees can be appropriate for conservative investors." Mr. Piper, a writer for the Wall Street Journal, Money, U.S. News, and Forbes also comments on his website (Piper, M, 2013), on the Prudential Product as follows:

1. If you were to cash in the annuity all at once, you won't get the full expected amount. 2. If you instead choose to turn on the income stream, it would typically payout at a rate significantly below what you could get with an ordinary fixed life annuity.

In the article entitled 'Annuities: More Cons than Prod', (Maurer, T 2013,) Mr. Tim Maurer cautioned that the "commissions on these products range into double digit percentages." Mr. Maurer also mentioned that the least favorite feature of annuities is "illiquidity" and the incomes are "taxed on a LIFO basis." In the booklet "*Annuity Insight*", (Fisher Investments, 2014), the experts at Fisher Investments ask retirees to ask themselves "Nine Questions Every Annuity Investor Should Ask." The booklet advises investors to read the contract carefully, compare the fees, consider the tax consequences, the inflation, the "floors and caps," and questions about "How will your beneficiaries be affected."

All of the discussions about Protected Withdraw Value annuity concentrated on the following complaints:

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1. The fees are too high (i.e. if it is not too high it will be ok.)
2. Misunderstanding about Account value and Protected Income Value.
3. Illiquidity
4. Plenty of fine prints.
5. Unexpected Tax consequence.

None of the above discussions, or warnings, questioned the claim that the concept of “protected withdraw value “as an innovative and beneficial option. It is the intention of this paper to point out that there are serious misconceptions which had never been mentioned in any of previous discussions.

In this paper we will use Prudential Premier Retirement plan as our model for calculation, but our conclusions can well be applied to other protected variable annuities. The Prudential Plan has both the protected and the non-protected annuities. There is an extra 1% fee for protected annuity. Each year, at end of the year, after market changes, no matter what is the value of your account, your account value will further be reduced by 7.45%, where 5% is the annuity payment paid to you, the investor, and 2.45% is the protection fee and administrative fee. It is important to mention that most of the time your protected withdraw value (PWV) will stay flat unless your actual account value rises significantly and exceeds the protected withdraw value.

This paper will use actual market data from the past thirty years to simulate the outcome of two different investments in annuities, one protected and one unprotected. The outcome of the simulation will reveal some of common misconceptions about protected variable annuities.

### **3. Methodology -- Using Past 360 months of Dow Jones Indices to Simulate Performances of the Annuities**

Assume that you invested a certain amount of dollars in a protected variable annuity with an insurance company. Assume that the insurance company, in turn, reinvested your money in a Dow Jones index fund. Given the DJ index at the time of the investment and DJ indices of every month of the following, say, twelve months, you would be able to compute the exact amount of your personal account, the monthly payments, and the value of the PWV in each of the following twelve months. The personal account values and the PWV values had to be adjusted, monthly, by the monthly annuity income, paid to you, and the monthly fees charged by the insurance company.

Assuming 30 years ago, you invested in two variable annuities, one is protected and one is non-protected annuities. Assume also that both annuities were reinvested in DJ index funds by your insurance company. After thirty years, you will now be able to examine every detail, including account balance and monthly payouts, to your investments in each phase of the past thirty years. You will also be able to compare the performances of both of annuity program.

In this paper we will split past 30 years of statistics into three different groups of data to examine different kinds of annuities. In one case we will use data from the earlier 20 years of the 30 years. In another case we will use the latest 20 years of the period and, in the third case, we will use all 30 years of data.

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The first example that we will use is a case using the Dow Jones Indices for 20 years, from December, 1984 through December 2004, for 240 months. Assume that you invested \$1286.77 in a “Protected Variable Annuity” on December 1, 1984. Your initial investment would become the “Protected Withdraw Value”, which may go up but would never go down. The amount of 1286.77 was the actual value of Dow Jones Index as of December 1, 1984. The insurance company would reinvest your investment in a Dow Jones Index fund. Since you were retiring, note that this is our assumption, you would immediately start to receive monthly annuity income from the insurance company. Your annual income would be 5% of the “Protected Withdraw Value (PWV).” (Actually, you will receive 1/12 of 5% each month.) The insurance company would also charge you “Protection fee” and “Administrative and Insurance fee.” After 20 years, what will be your total annuity income in 20 years? What will be your account balance at the end of 20 years? What would happen to your Protected Withdraw Values (PWV) during the 20 years?

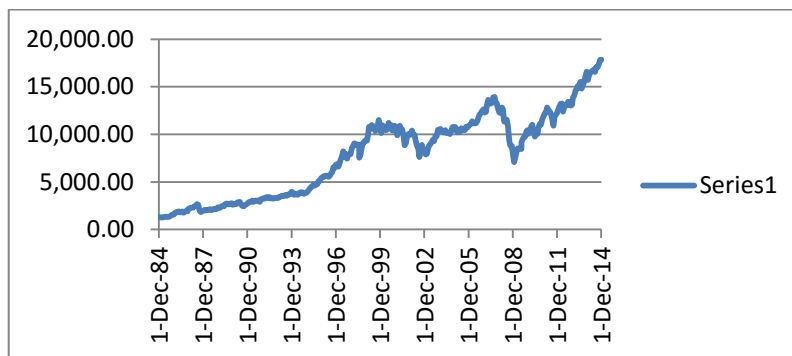
Assume that, on December 1, 1984, you also invested the same amount of \$1286.77 in a non-protected variable annuity, which was also reinvested in a Dow Jones Index fund. What would be your ending balance after 20 years? What will be your total annuity income after 20 years? Will the “Protected Annuity”, outperforms the “Unprotected Annuity”?

### 4. Findings--Misconceptions about “Protected Variable Annuity”

**Myth 1: Since the Protected Withdraw Value (PWV) can go up, but can never go down, therefore the Protected withdraw Value will always be greater than or equal to the unprotected withdraw value**

Assume that you invested \$1286.77 (Dow Jones index 12/1/1984) on December 1, 1994 in a Dow Jones Index fund, and leave your money there for twenty years. Theoretically your investment will become \$10,783.01 as of December 1, 2004, which is the Dow Jones index as of December 1, 2004. Figure 2 represents the DJ indices from 12/1/1984 through 12/1/2014.

**Figure 2: (30 years of Dow Jones indices, 12/1984-12/2014)**



Now suppose that, instead of investing in a DJ index fund, you invested your money a protected withdraw value variable annuity, offered by the Prudential Company. Your Protected Withdraw Value would never go down as we know. Your annual annuity income would be 5% (or 5%/12 per month) of the PWV value. The monthly annuity income, the protected withdraw value, the fees and the ending account values are calculated at the end of each month, according to the ending

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value of DJ index of the month. The monthly PWV fee is  $1\%/12$  of PWV, and the insurance and management fee is  $1.45\%/12$  of PWV value per month. Figure 3 shows the monthly values of the PWV values, account values, and annuity incomes of every month from December 1984 through December 1985, and monthly values on December 1 of each year, from December 1986 through December 2004. Please note that not all the monthly values of each month of the 240 months are displayed, but they are included in the calculations.

Figure 3 shows that the total annuity income in 20 years is \$2,540.94 and the ending account value as of the end of 20 years is \$1517.02 (please see the bottom of the table.)

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**Figure 3: Annuity with Protection (PWV), 12/1984-12/2004, Monthly Account Values, Protected Withdraw Values (PWV), Annuity Incomes, etc.**

	Protected Withdraw Value PWV	DOW JONES INDEX	% Change of Market Value during the month	Account value at end of month after market change	Monthly withdraw 0.416% (5%/Yr)	PWV fee .0833% (1% /Yr)	Insurance and management fee 1.45%	Account value after fee and withdraw
					0.004167	0.083%	0.121%	
Month								1286.77
Dec-84	1286.77	1286.77	-0.21%	1284.01	5.36	1.07	1.55	1276.02
Jan-85	1286.77	1284.01	-1.34%	1258.90	5.36	1.07	1.55	1250.91
Feb-85	1286.77	1266.78	-0.69%	1242.30	5.36	1.07	1.55	1234.31
Mar-85	1286.77	1258.06	4.56%	1290.58	5.38	1.08	1.56	1282.57
Apr-85	1286.77	1315.41	1.52%	1302.12	5.43	1.08	1.57	1294.03
May-85	1294.03	1335.46	0.90%	1305.65	5.44	1.09	1.58	1297.55
Jun-85	1297.55	1347.45	-1.00%	1284.60	5.41	1.08	1.57	1276.55
Jul-85	1297.55	1334.01	-0.40%	1271.40	5.41	1.08	1.57	1263.34
Aug-85	1297.55	1328.63	3.44%	1306.78	5.44	1.09	1.58	1298.67
Sep-85	1298.67	1374.31	7.12%	1391.10	5.80	1.16	1.68	1382.47
Oct-85	1382.47	1472.13	5.06%	1452.47	6.05	1.21	1.76	1443.45
Nov-85	1443.45	1546.67	1.57%	1466.15	6.11	1.22	1.77	1457.05
Dec-85	1457.05	1570.99	8.79%	1585.10	6.60	1.32	1.92	1575.26
Dec-86	1854.52	2158.04	3.06%	1911.20	7.96	1.59	2.31	1899.33
Dec-87	2190.53	1958.22	5.79%	1634.84	9.13	1.82	2.65	1621.25
Dec-88	2190.53	2342.32	-3.58%	1607.22	9.13	1.82	2.65	1593.62
Dec-89	2190.53	2590.54	1.42%	1701.29	9.13	1.82	2.65	1687.69
Dec-90	2190.53	2736.39	5.33%	1689.96	9.13	1.82	2.65	1676.36
Dec-91	2190.53	3223.4	1.37%	1738.33	9.13	1.82	2.65	1724.73
Dec-92	2190.53	3301.11	0.27%	1597.25	9.13	1.82	2.65	1583.65
Dec-93	2190.53	3754.09	5.97%	1736.00	9.13	1.82	2.65	1722.40
Dec-94	2190.53	3834.44	0.25%	1511.79	9.13	1.82	2.65	1498.19
Dec-95	2190.53	5117.12	5.44%	1926.39	9.13	1.82	2.65	1912.80
Dec-96	2190.53	6448.27	5.66%	2239.59	9.33	1.87	2.71	2225.68
Dec-97	2586.90	7908.3	-0.02%	2405.47	10.78	2.15	3.13	2389.41
Dec-98	2688.30	9181.43	1.93%	2630.40	11.20	2.24	3.25	2613.71
Dec-99	2993.48	11497.12	-4.84%	2848.56	12.47	2.49	3.62	2829.98
Dec-01	2993.48	10021.57	-1.01%	2156.64	12.47	2.49	3.62	2138.06
Dec-02	2993.48	8341.63	-3.45%	1553.61	12.47	2.49	3.62	1535.03
Dec-03	2993.48	10453.92	0.33%	1761.93	12.47	2.49	3.62	1743.34
Dec-04	2993.48	10783.01	-2.72%	1535.60	12.47	2.49	3.62	1517.02
					2540.94			

Now assume that, instead of the Protected Withdraw Value (PWV) program, you opted for a non-protected program. You had to pay for the administrative fee, but you did not pay for the 1% PWV annual fee. Figure 4 below represents the monthly incomes, and ending balances of your new investment.



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**Figure 4: Annuity without Protection, 12/1984-12/2004, Monthly Annuity Incomes, Account Values**

	Beginning Actual Account Value	DJ index	% Change of Market Value during the month	Account value at end of month after market change	Monthly withdraw 0.416% (5%/Yr)	NO PWV fee .0833%/month (1% /Yr)	Insurance and management fee 1.45%	Account value after fee and withdraw
Month					0.004167	0	0.121%	1286.77
Dec-84	1286.77	1286.77	-0.21%	1284.01	5.36	0.00	1.55	1277.09
Jan-85	1277.09	1284.01	-1.34%	1259.96	5.32	0.00	1.54	1253.09
Feb-85	1253.09	1266.78	-0.69%	1244.47	5.22	0.00	1.51	1237.73
Mar-85	1237.73	1258.06	4.56%	1294.15	5.39	0.00	1.56	1287.20
Apr-85	1287.20	1315.41	1.52%	1306.82	5.45	0.00	1.58	1299.79
May-85	1299.79	1335.46	0.90%	1311.46	5.46	0.00	1.58	1304.41
Jun-85	1304.41	1347.45	-1.00%	1291.40	5.44	0.00	1.58	1284.39
Jul-85	1284.39	1334.01	-0.40%	1279.21	5.35	0.00	1.55	1272.31
Aug-85	1272.31	1328.63	3.44%	1316.05	5.48	0.00	1.59	1308.98
Sep-85	1308.98	1374.31	7.12%	1402.15	5.84	0.00	1.69	1394.61
Oct-85	1394.61	1472.13	5.06%	1465.23	6.11	0.00	1.77	1457.35
Nov-85	1457.35	1546.67	1.57%	1480.27	6.17	0.00	1.79	1472.31
Dec-85	1472.31	1570.99	8.79%	1601.71	6.67	0.00	1.94	1593.10
Dec-86	1894.09	2158.04	3.06%	1951.98	8.13	0.00	2.36	1941.48
Dec-87	1607.39	1958.22	5.79%	1700.47	7.09	0.00	2.05	1691.33
Dec-88	1801.17	2342.32	-3.58%	1736.63	7.50	0.00	2.18	1726.95
Dec-89	1865.76	2590.54	1.42%	1892.20	7.88	0.00	2.29	1882.03
Dec-90	1845.38	2736.39	5.33%	1943.70	8.10	0.00	2.35	1933.25
Dec-91	2036.36	3223.4	1.37%	2064.34	8.60	0.00	2.49	2053.25
Dec-92	1953.88	3301.11	0.27%	1959.15	8.16	0.00	2.37	1948.62
Dec-93	2082.48	3754.09	5.97%	2206.88	9.20	0.00	2.67	2195.02
Dec-94	1991.76	3834.44	0.25%	1996.66	8.32	0.00	2.41	1985.93
Dec-95	2491.20	5117.12	5.44%	2626.62	10.94	0.00	3.17	2612.50
Dec-96	2942.05	6448.27	5.66%	3108.50	12.95	0.00	3.76	3091.79
Dec-97	3378.73	7908.3	-0.02%	3377.97	14.08	0.00	4.08	3359.80
Dec-98	3672.93	9181.43	1.93%	3743.90	15.60	0.00	4.52	3723.78
Dec-99	4308.83	11497.12	-4.84%	4100.23	17.95	0.00	5.21	4077.07
Dec-01	3289.38	10021.57	-1.01%	3256.05	13.71	0.00	3.97	3238.37
Dec-02	2560.88	8341.63	-3.45%	2472.52	10.67	0.00	3.09	2458.75
Dec-03	3007.16	10453.92	0.33%	3016.99	12.57	0.00	3.65	3000.77
Dec-04	2906.28	10783.01	-2.72%	2827.29	12.11	0.00	3.51	2811.67
					2685.44			

This is without Protected Withdraw Value. The total annuity income in 240 months is \$2,685.44 and the ending balance after 20 years is \$2811.67.

Figure 5 is the summary of Figure 3 and 4 above. According to Figure 5 below, the total income and ending balance of the annuity without the PWV option is far better than the outcomes from the annuity with the PWV option. This is a real surprise to most people. But why?

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**Figure 5: Total Annuity Incomes and Ending Account Values, With PWV vs. Without PWV**

	Total Withdrawal in 20 Years	Ending Value after 20 Years
<b>With Protected Withdraw Value</b>	\$2,540.94	\$1517.02
<b>Without Protected Withdraw Value</b>	\$2,685.44	\$2,811.67
<b>With PWV but no Fee</b>	\$2,744.97	\$2,129.10

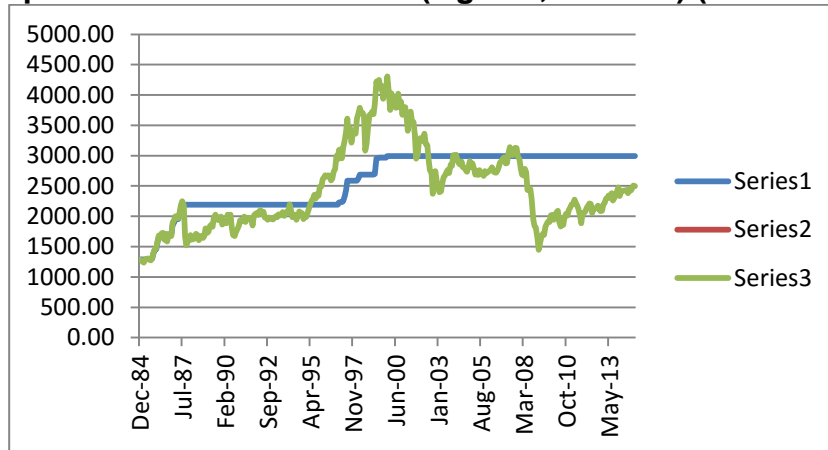
The answer is that when you receive an annuity income, you are withdrawing money from your personal account. It is your own money. When the market is down, your account value will go down, whether your annuity income is protected or not. If your income is guaranteed, naturally you will draw relatively more money from your own account and that you will have less money left in your account, while if your income is not guaranteed, you would not draw as much money from your account and you will have relatively more money left in your account. As a result, later on, if the market rebound, and if you have more money left in your account, your account value will go up more, sometimes much more, and your future annuity incomes will also be more. On the other hand, if there is not much money left in your personal account, as in the case of protected Annuity (PWV), your account value will not go up as much even if the market goes up. As a result, your PWV value, which goes up only if the actual account value exceed the current PWV, will just stay flat. That is why, in our example, your total annuity income with PWV is less than the total annuity income than without PWV and the ending account balance of the annuity with the PWV is less than the ending account balance of the annuity without the PWV. Here is another example:

Figure 6 represent 30 years of simulated performance of the annuity using Dow Jones indices. The horizontal line represents the PWV values, while the zigged lines represent the non-protected account values. As you can see, although the Protected Withdraw never goes down, it stays flat most of the time, while the unprotected account value could actually exceed the Protected Value. So Myth 1 is proved to be wrong according to the above two examples.

Figure 5 displayed above also include a calculation with protected annuity but without the 1% annual fee. As you can see, even without the protection fee, the protected withdraw is still no any better than the annuity without the protection, at least it is true for the period from 12/1/1984 through 12/1/2004.

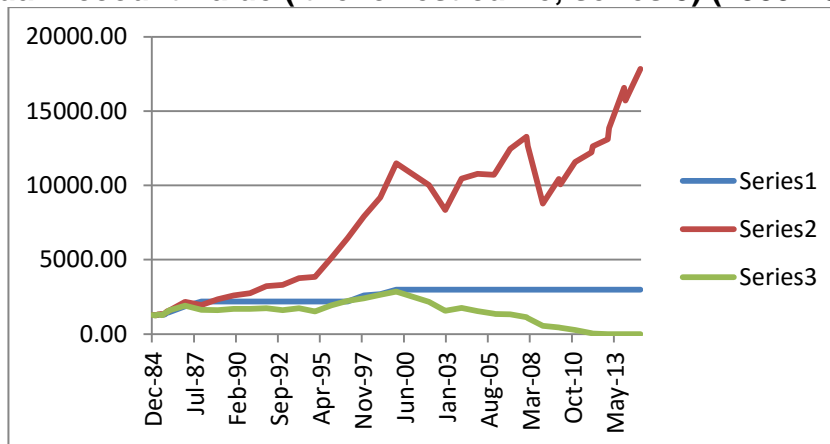
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**Figure 6: Protected withdraw Value (the flat horizontal line, series 1) VS Unprotected withdraw Value (zig line, series 3) (1985-2015)**



**Myth 2: If the market goes down the Protected Withdraw Value and your annuity income would not go down, but if the market goes up your Protected Withdraw Value, and your annuity income, would also go up.**

**Figure 7: Dow Jones Indices (top curve, series 2) vs PWV (flat line below, series 1) vs Actual Account Value (the lowest curve, series 3) (1985-2015)**



In Figure 7, the flat, horizontal line represents the PWV values. The zig line above the horizontal line is the actual Dow Jones indices for the past 30 years, while the zig line below the horizontal line is the actual account value of the same period. As we mentioned before, since the PWV program allows you to continue to withdraw larger amount of cash from your account, even when balance of your account is low, your actual account value will get smaller faster.

As noted before, in order for the PWV line to move up, it is necessary for the actual account value to go up and exceed the PWV. However, if there is not much balance left in your personal account, the account value can only go up a little in value, even if the market goes up for a large percentage. As you can see in Figure 6, the PWV remains flat for nearly 25 years even when the market was rising at a high speed. Myth 2 is proved to be wrong now.

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**Myth 3: Daily step up (as soon as market goes up your PWV will lock up the new high on the same day) is better than the annual step up (the PWV is updated once a year, if the market went up for the year.)**

The Prudential Premier Retirement Variable Annuity features “Daily Step Up” as oppose to most other variable annuities, which feature only quarterly or annually step. It seems that the company is excited about the daily step-up product. In the promotional booklet which I obtained recently, there is statement, which says “When it comes to creating retirement income, would you prefer a 1%, 4%, 7% or 100% chance of locking in your highest days?” (Figure 8 was copied from the promotional booklet)

**Figure 8:**

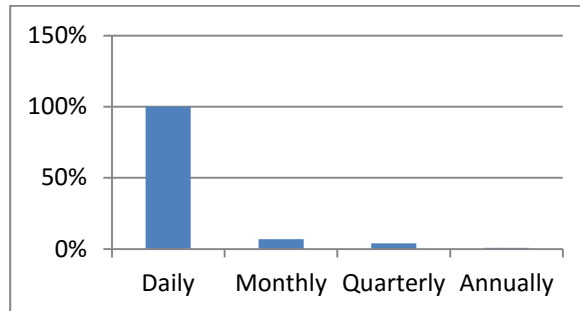
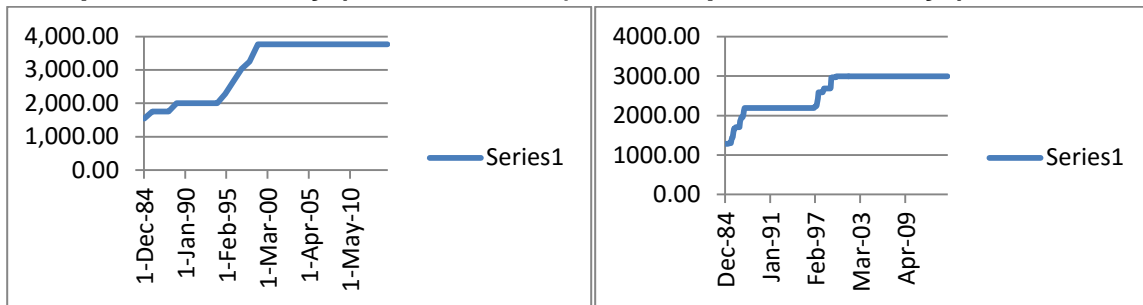


Figure 9 explains that a Daily Step-Up is really not a big deal.

**Figure 9:**

**PWV Updated Annually (12/1984-12/'14)      PWV Updated Monthly (12/1984-12/'14)**



The figure on the left represents Protected Withdrawal Values (PWV) from 12/1984 through 12/2014, while updated once a year. The figure on the right is PWV values of the same period, but is updated once a month. The monthly updated PWV was rising faster in the beginning, but it remains flat for a long period of time. The annually updated PWV on the left was rising rapidly, and eventually exceeded the monthly updated PWV, from year 1987 through year 1996, as can be seen from the table below:

## Ou

**Figure 10**

	12/1984	7/1987	12/1996	12/1999	12/2014
<b>Monthly Updated PWV</b>	\$1286	\$2190	\$2190	\$2993	\$2993
<b>Annually Updated PWV</b>	\$1286	\$1754	\$3024	\$3796	\$3796

Figure 10 shows that the account values of the Annually Updated PWV are much higher from December 1996 Through December 2014.

Since we do not have the daily data of Dow Jones index for the past 30 years, we will use monthly indices instead. According to Figure 10, it is clear that the annually update PWV annuities could actually be better than the monthly updated PWV annuities, at least in this particular case. There is no reason why the daily updated PWV annuities will be any better than the monthly or annually updated PWV annuities. Myth number 3 is proved to wrong now.

**Myth 4: Even if your account value drops to 0, you will continue to receive protected income.**

It is true that if your account balance hit zero then you will be receiving money from the insurance company, instead of from your own account. The fact is that it is very unlikely that your account balance will hit zero. The only way to do that, you will have to stay with the program for a long, long period of time. In the example above, the insurance company will terminate the contract as soon as you reach the age of 95 and you can't participate in the program before the age of 50, and there is an accumulation period of 10 years, during which time you are not allowed to withdraw any money, and if you plan to start to withdraw before age of 65, you can only withdraw 3% or 4% of your account value. Furthermore, there are more fees and restrictions, and fine prints that you won't find out until it is too late. "Read your contract carefully."

The following table (Figure 11) compares the outcomes of three different approaches, the Protected Variable Annuity, the Non-Protected Variable Annuity and an annuity set up by yourself by investing in a Dow Jones index fund and paying yourself from the fund, but without paying any Protection fee or administrative fee. We will pretend that the market in the next twenty years will perform the same way as it did during the past twenty year, i.e., from December 1994 through December 2014. Please note that there were two big market crashes during the past twenty years, the financial crisis of 2008 and the 911 of year 2001. Assume that your initial investment is \$3834.44 (Dow Jones Index as of 12/1/1994 was 3834.44)

**Figure 11**

	Total Income (240 Months)	Ending Balance
Protected Variable Annuity	\$10,472.43	0
Non-Protected Variable Annuity	\$ 8,239.61	\$4,778.17
Annuity Setup by Yourself	\$ 9,284.41	\$6,428.50

As you can see from Figure 10, the Protected Variable Annuity did not perform any better than the other kinds of annuities, even that the market crashed twice during the period.

## 5. Conclusion

The stock market may go down, but it will also go up. And, according to history, the long term trend is going up. When the market is down, the value of your account balance will also be down, and if your annuity payment is not protected, since your monthly payment is a fixed percent of your personal account balance, you will receive relatively smaller amount of monthly payment. However, if your payments are guaranteed, your payment will be more, which is also a relatively larger percentage of your actual account balance. Compare to annuity without protection, if the down market continues for a while, you will have drained a relatively larger proportion of your actual account balance. And when it's time for the stock to rebound, you have nothing or relatively smaller amount of money left in your account to take advantage of the rebound of the market. In the long run you are the loser.

Unless you have no other income to pay for your costs of living, it is not a good idea to pay an extra fee to get the guaranteed annuity. You will end up with a flat and very little income every month and a low balance left at the end of the term.

New and different versions of the Protected Withdraw Variable Annuity are being promoted by many Insurance companies even as of today. It is extremely important not to ignore the advices from the experts mentioned above. It is equally important to remember the following new conclusions of this paper::

It is not true that, with the protected annuity, your income would also go up if the market goes up. It is also not true that variable annuities which are updated daily are better than the variable annuities which are update quarterly or annually. For long term investments, since it is long term, presumably the market will be much more stable and less volatile. Therefore, in the opinion and the conclusion of this paper, you will be much better off leaving your money in your account and waiting for it to grow, and not paying for the fees, than withdrawing it constantly and consistently, as in the case of protected annuity.

## References

- Cruz, H, 2009, 'Variable Annuities', *Chicago Tribune*, viewed 20 Jan. 2015, <[http://Articles.ChicagoTribune.com/2009-10-18/news/0910150746\\_1\\_Variable-annuities-account-value-fees](http://Articles.ChicagoTribune.com/2009-10-18/news/0910150746_1_Variable-annuities-account-value-fees)>.
- Fisher Investments, 2014, *Annuity Insight*, Camas, WA, USA.
- Maurer, Tim, 2013, 'Annuities: More Cons than Pros ', *Special to NBC*, <[www.CNBC/id/101239958](http://www.CNBC/id/101239958)>.
- Piper, M, 2013, 'Variable Annuities, with a 5.5% Guaranteed Growth Rate', <[ObliviousInvestor.com/Variable-Annuity-With-A-5-5-Guaranteed-Growth-Rate](http://ObliviousInvestor.com/Variable-Annuity-With-A-5-5-Guaranteed-Growth-Rate)>.
- Prudential Financial Inc., 2013, *Destination: Retirement Income*, Newark, NJ, USA.
- Serrano, Jan M., 2012, 'Variable annuities: Helping client get the picture; best practices for financial advisors', *Proceedings of ASBBS Annual Conference*, ASBBB, San Diego, CA, 19 (1), pp.781-794.