

# Measuring Temperature with a Ruler

Is Your "Wealth Manager" Really a "Return Manager" in Disguise?

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## Part One - Exposing the Contradiction

*"There's none so blind as those who will not see"*

*Justin Hayward*

If you asked a meteorologist what the current temperature was outside and she responded, "eight and a half inches", you would likely be more than a bit perplexed. You might think to yourself, how might one measure temperature with a ruler? Clearly this meteorologist is an expert, certified as such with impressive credentials, so what seems to be a non-sense response must make sense somehow, at least to the expert. Or, perhaps you might think she didn't clearly understand your question, and you repeat it, only to get a more detailed response of, "I understood your question to be the current temperature outside, and as I said before, it is eight and a half inches."

Since the dawn of the investment consulting industry, money managers, mutual funds and investment consultants have measured, advertised, researched and reported investment returns. To be specific, it has been an industry focused on *time-weighted* returns. This is the ruler they have been using to measure the temperature of your wealth. Why would they do this? The notion is simple. According to these wealth meteorologists, *dollar weighted* returns (i.e., a thermometer to measure the dollar temperature) are not determined by their "skill" as advisors and are "not a fair" measure of their service. Dollar weighted returns are, according to such advisors, "outside their control" since it is determined by *clients' choices*, thus why they emphatically state it should NOT be how THEY are measured. But, the wealth reality is that dollar weighted returns are determined by BOTH the *client's choice* of when to make contributions (savings) or withdrawals (spending) as well as the returns. [Hmmm...does that sound like wealth goals to you?]

These advisors are right that the client specific goal choices influence wealth (dollar weighted returns) more than the time weighted returns they choose to use as their measurement of "effectiveness" and this is a very simple mathematical fact. But, with all the promises about achieving your dreams, about "connecting" to your goals, and providing "comprehensive" wealth management services, shouldn't "wealth managers" be taking responsibility for these choices about your goals? Instead, many financial advisors play a bait and switch game that can leave you exceeding your (their) return goal (or "benchmark" as they measure it with a ruler), yet none-the-less broke, sleeping under a bridge in a cardboard box...next to smelly people... licking your meals from the remnants of discarded cat food cans.

### *The Bait & Switch of Market Relative or Absolute Return Managers*

The reality is the math behind this bait and switch return game (as a naive proxy for wealth) is quite simple to understand. As an easy example, take the **wealth result** (i.e. actual dollars one could spend) for someone saving \$2,000 a year. In the first year, the market does 5% and your "ruler based wealth manager" produces a hot 15% return on your portfolio and tells you that your wealth temperature is quite cozy as evidenced by beating "your benchmark" by 10%. Your account after the first year is worth \$2,300, so you proceed to add another \$2,000 *as you had planned, and a comprehensive wealth advisor would know*, bringing your starting value for the second year to \$4,300. That next year the market is a bit warmer and happens to produce a 10% return, and your advisor underperformed the market by 8% with a 2% return. This leaves your account at \$4,386.

The "good news" is over the two years, **YOU BEAT THE MARKET!!!** Hurray!!! Maybe you should break out the champagne! It is hard to beat the market and your advisor did it!!!

Your advisor flaunts his (time weighted ruler based) brilliance to you in a colorful performance report, demonstrating that your return beat your market benchmark and even exceeded your "goal based absolute return" of 8%.

***Sample Performance Report***

Since Inception Returns:

Market Benchmark Return	7.47%
Absolute Return Goal	8.00%
<b>Your Account</b>	<b>8.30%</b>

Clearly you hired the right advisor! Or did you? Should you consider breaking out the "champagne of beers"<sup>1</sup> instead of the real thing? *Isn't your "wealth manager" supposed to be managing your wealth?* Did this superior return result in more wealth? Wouldn't you expect it to? If not, what are you paying them to do? Try going to a grocery store and spending a time weighted return. Let's examine how **much wealth** this simple example has after two years.

	<u>Your Account</u>	<u>"Your Benchmark"</u>	<u>Absolute Return</u>
Starting Value:	\$2,000	\$2,000	\$2,000
% Return Year 1:	15%	5%	8%
Year 1 Return in \$:	\$300	\$100	\$160
Year 1 Ending Value:	\$2,300	\$2,100	\$2,160
Year 2 Contribution:	\$2,000	\$2,000	\$2,000
Year 2 Starting Value:	\$4,300	\$4,100	\$4,160
% Return Year 2:	2%	10%	8%
Year 2 Return in \$:	\$86	\$410	\$332
<b>Year 2 Ending Value</b>	<b>\$4,386</b>	<b>\$4,510</b>	<b>\$4,492</b>
Average Return:	8.50%	7.50%	8.00%
<b>Compound Return:</b>	<b>8.30%</b>	<b>7.47%</b>	<b>8.00%</b>
<b>Growth of \$100</b>	<b>\$117.30</b>	<b>\$115.50</b>	<b>\$116.64</b>

<sup>1</sup> "Champagne of Beers" is a registered trademark of Miller Brewing Company, Milwaukee, WI.

Simple question to you...which would you rather have? **Would you prefer to have more money** yet only equal (the time weighted) return of the market? Or **would you rather have less money** but be able to boast to fools who do not understand basic math that you beat the market?

Be careful of who you show this to, because there is a high likelihood that if it is a ruler based "wealth manager" he will jump in and be defensive about how this simple mathematical fact is "flawed" because it didn't consider the risk (even though the compound return really does consider risk as evidenced by the growth of \$100 that has opposite wealth results versus *this particular client's* wealth plan and the higher returning *zero risk* absolute return produced less wealth too.) The simple example we provided above is what happened after only two years, but, does this mathematical fact of the impact of dollar weighted returns on actual wealth hold true over longer time periods?

Let's take an 80-year track-record of lower returns and higher risk and see where the WEALTH ends up to give you some ammunition if your "wealth temperature ruler manager" tries to play this game.

Here is the case. A twenty-one year old begins with a \$2,000 contribution to her investments in 1926. Each year she adjusts the contribution for 3% inflation. At age 65, she retires and begins withdrawing a \$90,000 annual inflation adjusted income from the accumulated wealth. Her blood pressure runs out at the ripe age of 100. Based on her risk tolerance, a portfolio asset allocation target of 75% stocks and 25% bonds is selected and rebalanced annually. Which portfolio would you choose if you had these actual 80 year records to look at **in advance**?

	Odd Manager	Even Manager
Average Return:	11.35%	11.35%
Risk (SD):	15.31%	15.56%
Compound Return:	10.24%	10.22%
Growth of \$100	\$243,488	\$241,037

Many advisors will sell you on how they are controlling risk. Notionally, in the (time weighted) market relative return world of ruler wielding wealth managers, reducing the risk improves the compound return, as is demonstrated by the "Odd Manager" above. Since such advisors evade taking responsibility for your wealth, and choose to judge themselves by the meaningless return and risk numbers, they tell you this higher return is a good thing and attempt to convince you that it is the way they should be measured. But what if in YOUR wealth plan, achieving this "improvement" actually REDUCES your wealth? Would you care? Or, would you still congratulate him (and perhaps yourself for picking him), despite having less money?

By the way, many advisors, in an attempt to at least theoretically accomplish such microscopic and imperceptible improvements in your risk, will sell you all sorts of expensive and illiquid investments (generally known as "alternative investments") that introduce a lot of uncertainty and happen to pay your advisor very well, too. That's not the reason they suggest them though, it is purely in your risk reduction interests. Regardless, you will observe there is a "benefit" of the slightly lower risk (as measured by standard deviation) and a slightly higher compound return and thus a bit more "Growth of an assumed \$100" investment. **But a \$100 one time investment isn't what our sample client is doing.** That probably isn't what you are doing either! Like most people, she is saving toward retirement and then spending during retirement. She

isn't just plopping out \$100 in the beginning and forgetting about it for 80 years. She has goals like a retirement income and a savings plan that enables that income.

### *The Reality*

The Odd & Even "managers" are nothing more than the actual 80 year record of a 75% Stock and 25% Bond blended portfolio, rebalanced annually that outperforms this benchmark by 0.75% over the entire time period, the "managers" just do it in different years. The odd portfolio outperforms by 3% in odd years, and underperforms by 1.5% in even years. The reverse is true for the even portfolio. Both have the same average return. The compound return and thus the Growth of \$100 for the odd manager happen to be a bit better than the even manager because of the slightly lower risk, the "value" so many of ruler wielding return managers seek, and sell as their value in their pitches.

But, since this 21 year old had specific goals, and since her "wealth manager" was supposedly advising about her specific goals, and since he had clairvoyant knowledge of what would happen for the next 80 years with this portfolio, **could he make the most of her WEALTH?**

The slightly "better" odd manager had this poor woman broke the last year of her life. Imagine being so elderly and bankrupt. The "worse" manager with the slightly higher risk and lower compound return met her cash needs throughout her life and left an estate of \$214,885 to boot. **WHICH DO YOU THINK SHE WOULD PREFER? WHICH WOULD YOU PREFER?**

Now, many advisors will say they cannot control and manage "when" (like odd or even years) their "superior" results will occur. That is exactly the point this paper is attempting to convey. If the timing of returns matter to actual wealth and the timing is "uncontrollable," then why focus on achieving something that doesn't create wealth? Yet, they chant, "We are long-term investors" and "it is critical you stick with your long term plan." **If THAT is what your advisor says, he is admitting that he is not managing your portfolio to produce superior wealth, but instead attempting to produce returns that may COST YOU wealth, but may be defensible as superior.**

Now, what if your wealth manager really managed your wealth instead of potentially meaningless return numbers? Is that possible or is managing your wealth something that is outside of the advisor's control as so many have posited in the past? If your advisor holds himself out as a wealth manager, should he or she take responsibility for actually doing so? This IS NOT impossible if your advisor takes responsibility for really managing wealth and crafts advice about the best wealth (as opposed to return) decisions for you. Part two of this paper will expose you to the millions of dollars of potential benefit that may come from managing wealth as opposed to returns.

## Part Two - Comparing Approaches: Managing Wealth vs. Managing Return

*"Receiving a million dollars tax free will make you feel better than being flat broke."*

*Dolph Sharp*

In part one of this paper, we highlighted the basic contradiction between making the most of (and managing) one's wealth versus seeking various time weighted, risk adjusted market relative returns that so many investors and advisors mindlessly chase. We showed a simple example of how lower returns and higher risk can result in more money (wealth) and also how such timing could play out over an eighty year time horizon with "superior" returns merely alternating between odd and even years. We posited the notion that a real wealth manager should really be focused on managing wealth instead of managing potentially meaningless risk and return numbers. We explained how many advisors who call themselves wealth managers attempt to evade their responsibility to actually manage wealth (and dollar weighted returns) with the claim "dollar returns are outside of my control" because savings and spending are determined by the client. Finally, we exposed how the game of *managing returns instead of dollars* enables advisors to make a defensible case for their supposed "value" even if that "value" ends up destroying the dollar result for the client.

### *Asset Allocation*

Normally, the way asset allocation is practiced by the typical "wealth" (return) advisors, the focus is not really on wealth or your specific goals, but instead on the risk and return characteristics as measured on a simple risk versus return chart, notionally to create a better portfolio for your *risk tolerance*. But as we have already seen in part one, such "better" portfolios may only be "better" from the standpoint of these meaningless (but defensible) risk and return measures, and actually may end up producing INFERIOR wealth results.

To a real wealth manager though, asset allocation is set not by a risk versus return chart that ignores the real wealth effect on your goals, instead this main investment decision of asset allocation is ***made based on the impact to your wealth relative to the funding status of your unique goals***. To a real wealth manager, the main decision of asset allocation is set *to the minimum risk level necessary* to have sufficient confidence for the goals one is attempting to fund, regardless whether the client can "tolerate" more risk or may achieve a potentially higher return (but yet with potentially less wealth.)

### *Pension Plans Can Be Over Funded, Why Can't You?*

I realize that many in the industry say there is no way you can have too much money. Even if it obvious to you that you do have too much money for the goals you personally value, often the industry claims that your problem is establishing a means of protecting that "excess" wealth from estate taxation. And the solution they would offer is to position you in an unnecessarily risky portfolio to produce even more "excess" returns that you do not need for your goals. Alternatively, these "wealth managers" will run a Monte Carlo simulation that shows you there is still a 1%, 5% or 10% chance of "failure" to scare you into taking more risk than needed (without disclosing there is an 80% chance of leaving an estate that is two to ten TIMES greater than your estate goal.)

Why is it that wealth management plans never seem to be over funded, yet it is still possible for a pension plan? After all, isn't your personal wealth plan similar to a pension fund? If a pension plan can be over funded, i.e. more CURRENT portfolio value than is likely to be needed for the liabilities of the pension (the liabilities of a pension fund are akin to your spending goals), then why can't your WEALTH plan be over funded? Shouldn't there be a measure of this that is monitored? Shouldn't your wealth manager be able to tell you that if the portfolio results produce more than x dollars over the next year, you will be over funded? Without such a measure, how could one tell when their wealth plan is over funded? To real wealth managers, your wealth plan can become over funded, just like a pension plan can, IF your advisor (or you) is truly managing wealth instead of optimizing potentially meaningless time weighted returns and risk. If an advisor isn't going to advise you to adjust your wealth goals (liabilities) in the face of being over funded, shouldn't they at least advise you to remove some investment risk from the table because you can afford to do so? This is what SHOULD happen in wealth management, just as it does in pension plans.

When a pension plan is over funded, trustees of the pension may act on one or more of the several choices they have *because of the excess MONEY (wealth)* fortunate timing of market results produced *for the liabilities (spending goals)* of the plan. Pension trustees may reduce future contributions (the equivalent to reducing how much you are saving towards your goals), they may increase the benefits of the plan (equivalent to increasing your spending or estate goals) or they may reduce the portfolio risk (because higher risk is not warranted for the liabilities of the plan) either by adjusting the portfolio allocation, or by immunizing a portion of the liabilities.<sup>2</sup> The bottom line is that prudent fiduciaries will act upon fortunate market results to reduce contributions, increase benefits, or reduce investment risk. Their actuaries help them with this calculation. Isn't this what a true wealth manager should do as well?

Conversely, unfortunate timing of market results may cause a pension trust to become under funded. In such cases, the assets of the pension trust are insufficient to confidently support the liabilities of the plan. Prudent trustees would act on this by either increasing contributions to the trust (the personal wealth equivalent of increasing how much you are saving), freezing or limiting the accrual of future liabilities (equivalent to reducing or freezing your retirement spending or estate goals or delaying a portion of these goals), or possibly changing the asset allocation of the trust to increase the potential return, thereby also increasing the risk of the portfolio. These are basic choices and your personal wealth goals should be treated no differently than a pension plan and should consider all of these choices.

### *The Fallacy of Risk Tolerance in Setting Asset Allocation*

In many of my writings, I have criticized the notion of identifying the pain one can bear (risk tolerance) and then implementing an asset allocation that is designed to actually EXPERIENCE that risk. This is of course an absurd behavior, but yet it is standard fare for many advisors. No one would rationally accept more pain (risk) merely because they can tolerate it IF one could confidently fund the *goals they personally value* with a lower risk asset allocation. That's why pension plans measure whether they are over funded! In my paper, [The Efficiency Deficiency](#) I showed a simple example of how imperceptible the differences in actual historical

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<sup>2</sup> Immunization of liabilities by pension trusts is effectively the same as reducing portfolio risk by either purchasing annuities for specific liabilities, thus moving liability risk to an insurance company, or by purchasing zero coupon bonds that are tied to a specific set of future liabilities. In either case these actions effectively get the liabilities "off the balance sheet." Regardless of the approach, the net overall portfolio allocation is effectively reducing the equity market risks because taking that needless risk when there is excess funding is imprudent for the plan, given the liabilities of the plan.

returns would be for two materially different asset allocation choices with significantly different risk and return characteristics based on CRSP (Center for Research in Securities Pricing) data back to 1926.

	<u>Aggressive Portfolio</u>	<u>More Conservative</u>
Allocation:	60% Large/40% Small	55% Large/25% Small 18% Bonds/2% Cash
Number of years in the last eighty years that performed:		
Less than -30%	3 ('30,'31, '37)	2 ('31 & '37)
Less than -1.55%	20	19
Greater than +15%	38	38
Between +15% & -1.55%	22	23

Most investors can "tolerate" a loss of 1.55% in a bad year (although there is no reason to do so if you can confidently exceed your goals with less risk than that.) Historically, it would be difficult to imagine someone who could perceive the difference between these allocations over the last eighty years. When it comes to measuring risk as loss of wealth, we see almost identical results. At the very extreme, we had to go back to 1930 to incur one additional observation of a severe decline in the aggressive portfolio that was not present for the more conservative portfolio.

#### *The "Risk Tolerance" Game*

Between the minor losses of 1.55% and the major losses of 30% or more that happened more than seventy years ago, there were various other years that had losses for both of these allocations falling somewhere *between* these two extremes. THIS is what your advisor is often attempting to identify in your "risk tolerance." He is attempting to identify your risk tolerance for pain between these two extremes. Yet these extremes are none-the-less clearly outside of his control and have almost equal chances of occurring regardless of the asset allocation selected. Despite how useless such effort is and how unmanageable it is in reality, once the magical risk tolerance is identified, the focus moves to "optimizing" the risk and return characteristics. The supposed value becomes selecting "superior" investments, all in ignorance of the client specific wealth goals and whether being right about any of these "superior" portfolio traits may end up destroying wealth for the unique client's circumstances.

#### *The Wealthcare Process Applied to Over and Under Funding*

A lot of retail investors are pitched how their "wealth will be managed like institutions would manage their portfolios." Just because a pension fund looks at a risk/return chart, or uses a particular money manager **does not mean** that the trustees of the pension would make the same decisions for your PERSONAL PENSION...i.e. your wealth plan, since your liabilities (goals) would be different.

The Wealthcare process conceptually turns your personal wealth management plan into your own personal institutional quality pension trust. When markets produce fortunate superior results causing you to be over funded, the same choices available to trustees of pension plans are evaluated and prioritized, like should you reduce contributions (savings), reduce investment risk, or increase benefits (spending) and/or terminal values (estate goals.) In Wealthcare, we identify the specific dollar values that would cause you to be over funded; these values are monitored, measured and *known in advance*. In the case of a pension plan, the trustees would weigh the relative value of all of these choices. In the case of your Wealthcare plan, you are the trustee and your advisor would counsel you on the impact of such choices to help determine your unique preferences among those choices.

### *How Real Wealth Management Works*

Connecting your asset allocation choices to your contributions (savings) and liabilities (spending) based on your funded status over time instead of just a simple risk and return analysis for a "risk tolerance", is really how institutional pension funds are competently managed. Of course, the fund's trustees and advisors look at all of the choices, not just asset allocation. But if we were to assume that the choices to reduce contributions or increase benefits would be ignored, and all we do is shift the portfolio allocation to an efficient allocation that brings us as close as possible to our targeted 82% confidence level<sup>3</sup> whenever actual market results cause excessive over or under funding, **we discover that we can really begin to manage and maximize wealth**, albeit not returns and risk as they are normally measured. But then again, wealth management's purpose is to maximize dollar wealth and one's lifestyle, not such potentially meaningless and abstract risk or return numbers.

### *The REAL Wealth Management Effect*

When one is a true wealth manager, and knows in advance the current and future portfolio values where funding is either excessive or insufficient for a particular set of contributions and withdrawals, we can observe the value to monitoring and adjusting the investment policy asset allocation based on the funded status. We can also compare the wealth result to many of the generally accepted rules of thumb that may destroy wealth by ignoring the funded status; yet produce what would normally be considered "superior" and defensible results.

The case we will use as an example for analyzing this effect is a simple one. Pretend it is 1926 and a 20 year old widow needs to generate \$5,000 a year in annual income adjusted for inflation (about \$50,000 in today's dollars) from the proceeds of a \$100,000 life insurance policy left to her by her deceased husband. We will then compare the WEALTH result of different asset allocation approaches as follows:

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<sup>3</sup> For purposes of the demonstration of the mathematics behind tying allocation choices to the funded status for a particular set of wealth goals, we use our software's six default portfolio allocations, which are 30%, 45%, 60%, 80%, 90% and 100% equities. Over funding is defined as more than 90% confidence and under funding is defined as less than 75% confidence using a Monte Carlo simulation and our capital market assumptions. This *should not* be construed to imply a track record, but instead should be viewed merely as a means of conveying the mathematical dollar effect of adjusting equity risk exposure for a *particular liability stream*, following these simple rules. It is important to note that the shifts to various portfolio allocations are completely dependent on the market's impact on a unique set of client circumstances and that extreme market environments will cause the confidence level to fall outside of the targeted range, and that range cannot be met in all years merely by adjusting the allocation. In such cases, the allocation used is the one that brings us closest to our targeted confidence level. This is why real wealth management would consider adjustments to contributions, withdrawals, timing of either of these, or terminal value in addition to the allocation choice.

**#1 Long Term (Risk "Tolerance") Allocation** - Asset allocation is set once to a policy that considers both the long term nature of the plan, but also heavily weighs the sensitivity to risk of the immediate annual cash needs and the widow's personal sensitivity to investment risk. The allocation is rebalanced annually.

**#2 Age Based Allocation (Target Date)** - The asset allocation investment policy is adjusted each year to a simple formula based on the equity exposure being set to 100% less the person's age. This is similar to how many target date funds determine equity risk exposure. The portfolio therefore begins with 80% equity exposure (Age 100 less the current age of 20) and is reduced by 1% each year as the person ages. Thus, at age 60 the equity exposure is 40%, at age 80 it is 20%, etc.

**#3 Stocks for the Long Run** - This is a 100% equity allocation created under the premise that given this is a very long-term plan and "equity risk declines with time," and given that equities produce superior long-term returns, then 100% equities is the "right" allocation. (See Jeremy Siegel's book: *Stocks for the Long Run*)

**#4 Superior Selection** - This is a portfolio that has very low risk and the same asset allocation as the Long Term (Risk "Tolerance") Allocation, but superior investment selection causes it to outperform the asset allocation benchmark net of expenses by 1.5% a year. It also assumes there is no timing risk of when superior or inferior performance occurs as shown in our odd and even choices in part one; the portfolio simply out-performs by the exact same amount each year. The portfolio has very low risk and very high returns relative to the other portfolios.

**#5 Wealth Management Allocation** - This is a portfolio that begins with one of the six default FWC portfolio allocations to have 82% initial confidence, but the portfolio allocation is adjusted nine times over the course of 80 years (actually all occurring during the first 20 years because she would be excessively over funded thereafter) based on the over and under funded status as described in Footnote 3. It has a relatively low return and relatively high risk and the allocations merely replicate the index result.

All of these fictional allocation choices can be examined for our example widow from a WEALTH perspective. To contrast the difference between a return manager versus a real wealth manager, the first consideration would be how such a return manager would decide between these allocations, especially if the manager could know in advance what the return based characteristics will be over the next eighty years (remember, we are deciding this in 1926.) Let's presume for a moment the financial advisor had a time machine and could see what the future portfolio results would be for a performance report for each of the portfolios. The common statistics return managers use to make their decisions based on track records in this case would actually be known future results and have no uncertainty of the future result of their normal track record based criteria, an uncertainty that would otherwise always be present. Yet, even with this clairvoyance courtesy of the time machine, could they pick a superior approach for the WEALTH result for our widow? Which would you pick?

*Table 1 - Clairvoyant Statistics*

	Average Stock Allocation	Compound Return	Risk (SD)	Growth of \$100
Allocation Choice:				
#1 - Long Term Risk Tolerance	38%	8.29%	9.55%	\$58,505
#2 - Age Based (Target Date)	41%	8.42%	14.43%	\$64,172
#3 - Stocks for the Long Run	100%	10.36%	20.20%	\$265,707
#4 - Superior Selection	38%	9.80%	9.55%	\$176,612
#5 - Wealth Manager	38%	8.58%	14.39%	\$72,460

These statistics make it pretty clear that there are only two choices that really need to be considered. To the typical return manager, if the client is sensitive to risk, the choice of allocation #4 with its consistent superior selection looks like a no-brainer choice. This must be why so many advisors attempt to produce "superior" risk adjusted results like this portfolio. Otherwise, if the client with this long-term eighty-year time horizon could bear the risk of an all equity portfolio, experts like Jeremy Siegel would argue that the higher return offered by stocks would be a better choice as in allocation #3. It is interesting how poorly the rule of thumb of setting the equity allocation tied to age of the client allocation #2 fares. From an efficiency perspective it has much higher risk for barely any additional return. Isn't it nice that the Department of Labor granted this approach a special exemption from fiduciary liability for automatic selection for 401(k) plans?

Perhaps you are a sophisticated wealth manager and you know that all of the statistics above mean nothing, since the timing of when various returns occur may not have a relationship to any particular client's wealth result. You might know that the dollar weighted return is what will determine the wealth outcome, that it is unique to each client's cash flows, but the performance reports from your time machine only give you statistics based on the allocation results over the life of the plan, not on your particular client's situation of unique cash flows that would impact the dollar result. However, your time machine might be able to give you some more interesting information. While it cannot model your particular client's choice of contributions and withdrawals over the next eighty years, it can show you whether this notion of "wealth management" and measuring funded status more frequently had higher or lower returns relative to the other choices as shown in Table 2.

*Table 2 - Clairvoyant Statistics Relative to Real Wealth Management*

	Number of Years in the next 80 the allocation had a higher return than #5	% of Years allocation had a higher return than #5
Allocation Choice:		
#1- Long Term Risk Tolerance	48	60.00%
#2- Age Based (Target Date)	39	48.75%
#3- Stocks for the Long Run	48	60.00%
#4- Superior Selection	65	81.25%
#5- Wealth Manager	NA	NA

As a wealth manager, while you cannot model the actual results for your client, between the portfolio statistics in *Table 1*, and number and percentage of years that the allocation choices out-performed the return of the wealth management approach (*Table 2*), you have some pretty compelling knowledge that should be useful, courtesy of your time machine. Only the aged based (target date) approach had more years where returns were lower than the wealth management approach. The other allocation choices out-performed the return of the wealth management approach anywhere from 60% to over 81% of the time! Does this new useful information change the allocation choice you would select for your 20 year old widow in 1926?

Regardless of this additional information, we probably wouldn't change our allocation choice to be the #5 wealth management allocation approach. Between the inferior risk and return statistics, and the knowledge that the returns will be higher in 60-81% of the years, we would still probably choose either stocks for the long run of allocation #3 if the client could bear the risk of an all stock portfolio, or attempt to produce superior results through selection as in allocation #4 if the client could not bear the risk of an all equity portfolio. All of the other choices clearly *appear* inferior, at least if you are measuring temperature with a ruler that is.

So, armed with this knowledge, courtesy of our time machine, it should be easy to pick a winning allocation strategy for our widow, it is merely a matter of her tolerance for risk. Correct?

#### **The Wealth Result for the Allocation Choices for our 20 Year Old Widow:**

As you may recall, our 20 year-old widow received \$100,000 in life insurance proceeds from her deceased husband and needed a \$5,000 annual income stream adjusted for 3% inflation each year for the next 80 years. What would the result be for her unique wealth management plan for each of the allocation choices? Some of the results are shown in *Table 3*.

*Table 3 - Wealth Results for Allocation Choices for the 20 year old Widow*

Allocation Choice:	Wealth Result	Number of Years \$ < #5 Wealth Mgt.	% of Years \$ < #5 Wealth Mgt.
#1- Long Term Risk Tolerance	Broke @ 51	78	97.50%
#2- Age Based (Target Date)	Broke @ 50	79	98.75%
#3- Stocks for the Long Run	Broke @ 55	75	93.75%
#4- Superior Selection	\$1,072,678	77	96.25%
#5- Wealth Manager	\$4,878,522	NA	NA

**Nice job** picking the "superior" alternatives of allocations #3 or #4! Our stocks for the long run approach didn't run all that long with the widow being broke 35 years into her wealth management plan with another 45 years to go. The excellent risk control and superior return of #4 had our widow dying at age 100 with an estate just over \$1 million, which when adjusted for inflation is about equal to the spending power of the original \$100,000. To achieve this "superior" result, all one needed to do was beat the allocation of #1 *every single year by exactly* 1.5%. Good thing we had a time machine because as we can see, if our attempts failed and all we did was equal the allocation, she would have been broke at age 51. Finally, do we need to poke any more fun at the stupidity of basing the allocation on only the person's age? It doesn't look like it makes sense from ANY perspective (return, risk, % of years of out-performance OR wealth!), yet age based allocations and target date funds are growing in popularity every day because of their "simplicity." Simple stupidity!

However, look at the wealth management results of #5. This superior WEALTH result was produced not by beating markets, it just assumes the result of the indices like all of the other allocation choices (with the exception of #4 that outperforms by 1.5% every single year.) At no time did the allocation ever beat itself! The passive allocation choice changed nine times over the course of the 80 years (actually all in the first 20 years because she was over funded thereafter), not based on a risk tolerance, not based on market forecasts, but instead based on the funded status as described in Footnote 3. Despite the allocations *never producing superior returns* to the asset classes used, despite the return being "beat" in 60-81% of the years (except for the miserable age based allocation alternative) and despite having far higher risk and far lower return than the next best allocation choice, **FOR THIS CLIENT'S GOALS**, the wealth management allocation choice produced **FOUR AND A HALF TIMES MORE WEALTH!!!**

Since the return manager industry is not focused on wealth, and thus they get to choose how things are benchmarked (i.e. measuring temperature with a ruler), eighty years hence they would be able to justify costing this widow more than \$3.8 million of wealth, albeit with massively superior risk adjusted returns. To me, this is not ethical. Using an approach that produced superior returns and less risk is defensible so long as you are also willing to measure temperature with a ruler.

If you really wish to be honest though, you would not play this risk and return game and instead focus on the client's wealth. It is what one can spend. It is what really matters. It is what many are advertising but evading. It isn't rocket science; it is merely a mathematical real-

ity of accepting risk only when one has the capacity to do so, and removing risk when it is not needed for the liabilities, just like any competently managed pension plan does every day. It also requires that one avoid needless risks that introduce uncertainty for *when* superior results might occur. We saw the impact of that in part one of this paper with the odd and even managers.

Many investors have bought into and accepted what return managers and the product vendors promote and sell. They toss aside their wealth result in ignorance of simple, yet meaningless, risk and return numbers. They become victims of return or risk control salesmen, merely because they don't know the difference between REAL wealth management and return managers. They are fooled and it is easy to fool them with the industry promoting a standard that is meaningless to the investor's wealth, yet very profitable for the advisor's wealth. This may be generally accepted. It may be commonplace. It may be legal. To me though, it is unethical to build a business around creating victims by preying on their ignorance. Ethically managing wealth, should be the future of financial advising if that is the value an advisor represents they deliver.

## Part Three - Market Behavior: Over or Under-Funding Client Goals

*"If one advances confidently in the direction of his dreams, and endeavors to live the life which he has imagined, he will meet with a success unexpected in common hours."  
Henry David Thoreau*

In part one of this paper, we showed some simple examples of the effects of the difference between time weighted returns (return managers) versus dollar weighted (wealth manager) returns. Part two went through a real life client example and demonstrated how some of the "best" generally accepted and even clairvoyantly "successful" approaches of asset allocation ended up costing a widow investor millions of dollars of wealth. It even showed how over 80 years of actual historical results, a wealth management approach with higher risk and a lower time weighted return that only equaled the performance of the asset classes used, ended up producing millions more in wealth than an approach that exceeded the market benchmark returns by 1.5% a year with less risk.

Matching the main decision of asset allocation policy to your funded status, removing needless investment risks when you are over funded *for your goals* due to strong market results (we call this over-funded status the "sacrifice zone" because you are needlessly sacrificing either by accepting unnecessary exposure to investment risk, or sacrificing goals you could otherwise confidently fund) is a key decision that is normally evaded or simply ignored by return managers who shamelessly advertise themselves as wealth managers. Likewise, accepting additional investment risk only when needed to compensate for an under-funded status due to poor market results (we call this the "uncertainty zone" because the confidence level is insufficient for the goals one is funding) is the **only** proper time to accept a portfolio that may expose you to your tolerance for risk, or maybe even more.

### *Return Managers Abusing Monte Carlo Simulation*

The very mathematics *real wealth managers* use to measure funded status are manipulated by return managers and assembled into misleading presentations. Monte Carlo simulation has come in vogue for such return managers, generally under the packaging of measuring or increasing one's "odds of success" of supposed "wealth management plans" defined the way return managers like to define it, which is often a plan to scare you into sacrificing your lifestyle. Notionally, measuring such "odds of success" should give the consumer some confidence in the advisor's advice. Calling it "odds of success" is very misleading because the goals as they are normally modeled have almost **NO CHANCE** of working out as planned. How can something that has such high "odds of success" have almost no chance of working out as planned?

Such odds assume that the client and advisor **NEVER** pay attention to what is happening to the client's funded status over the **ENTIRE** planning horizon. Ask yourself this: Would you change your savings rate, spending rate, asset allocation or estate goals if your portfolio declined by 50% over the course of the next two or three years and your new confidence level based on this current portfolio value drops to only a 25% "chance of success?" Of course you would! You would shrink, delay or freeze goals, increase the potential return by accepting more risk or increase the contributions you are making toward savings, etc. You might even delay buying that new Lexus for an extra year. Long term Monte Carlo (or geometric mean) confi-

dence levels (or odds of "success") **assume you would not change anything.**

*Would Something Change in Your Life if You Had an Extra Million or Two?*

Likewise, if your portfolio doubled in just a few years, wouldn't you consider spending a bit more? How about reducing the investment risk you are taking or how much you are contributing to savings? Might you increase your gifting to charity or your kids if you had a spare million or two? How Monte Carlo simulations, with their typical "odds of success" are normally run assume you would ignore the fact you had millions more and would do nothing in response to that excess wealth. THAT is clearly something to have confidence in, isn't it? NOT!

The root of this problem stems from the history of the financial planning industry. For decades, what planners have attempted to do is plan your financial future. In the old days before Monte Carlo or geometric mean simulations were used, it was easy for a client to see that the planner's projections were completely unreliable. The old versions would project out how much money a client would have 20 to 30 years hence as an exact dollar amount, based on a simple return assumption. But, all it would take would be a bad year or two to expose to the client that the planner couldn't forecast what the portfolio would be worth next year, yet alone 30 years from now. Just put yourself in the shoes of a client starting with \$1 million and planning on retiring in a few years based on the advice of such a planner at the beginning of this decade. The planner would have shown you that your \$1 million would grow to \$1,259,712 over the next three years based on a conservative 8% assumption. The reality of the bear market turned your \$1 million balanced portfolio into \$877,707. Now it is time to retire! Oops! Where am I going to come up with that missing \$382,000?

Such planners rapidly adopted Monte Carlo (and geometric mean) "odds of success" simulators. The "odds of success" such engines run demonstrate there is a wide range of potential outcomes. Take our 20 year old widow from part two of this paper as an example.

In *chart one*, we see *the bottom half* of the trials that were run for our 20 year old widow based on our initial advice in 1926. *Table four* shows the range of ending values in deciles.

*Chart One - Simulation trials of 50th-100th percentiles for our 20 year old widow*

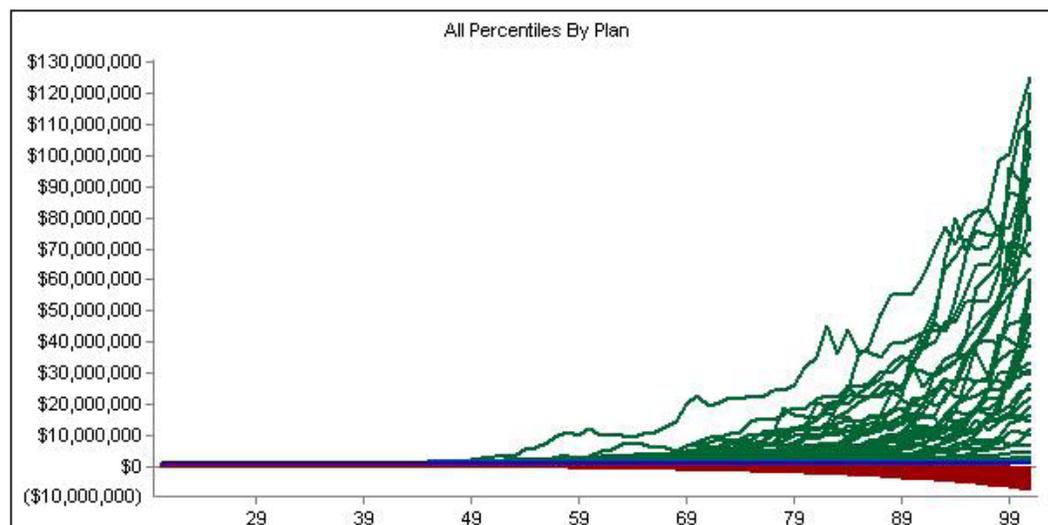


Table Four - Ending values of simulations by decile for our 20 year old widow with \$100,000 initial portfolio, \$5,000 inflation adjusted spending and 83% confidence level based on a portfolio with 80% equity exposure.

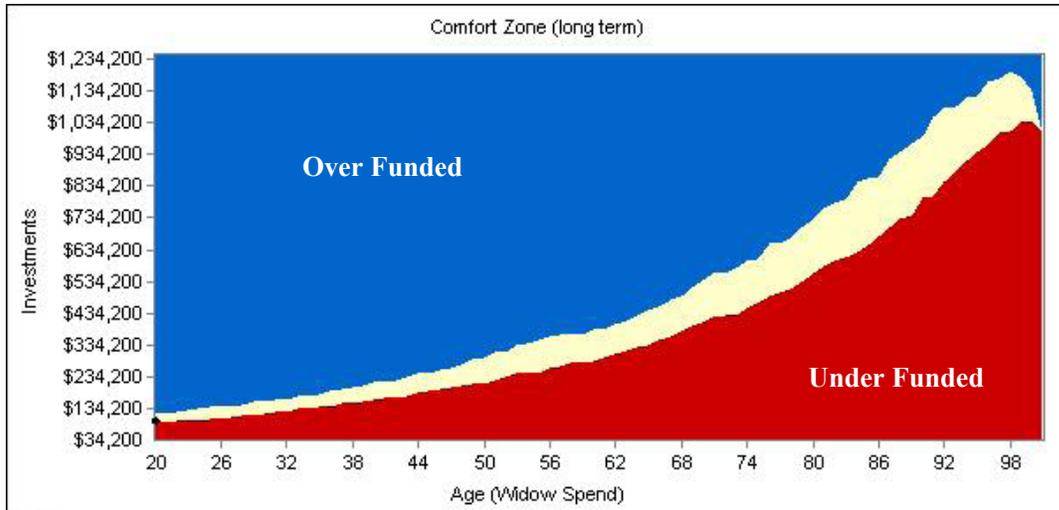
Percentile	Ending Value	Plan "Failure" Age	Return
0	\$12,285,385,311		16.32%
10	\$1,211,520,308		12.92%
20	\$518,547,009		12.50%
30	\$341,030,507		11.32%
40	\$217,427,944		11.26%
50	\$125,289,697		11.66%
60	\$67,676,866		9.95%
70	\$31,383,768		9.00%
80	\$6,794,821		7.67%
90	-\$4,020,177	54	8.89%
100	-\$7,286,223	33	7.39%

So, we see in these results that our widow with 83% initial confidence (or the idiotic notion of "odds of success") assuming NOTHING EVER CHANGES, would have about equal chances of being broke before age 54, or a billionaire. Both are 10% chances falling at the 90th and 10th percentiles. She has a one in five chance of being outside of the range of bankruptcy or a billionaire. Clearly we need fatter distribution tails than this! We also observe that she has a 50% chance of having more than \$125 million and even a 70% chance of having more than \$31 million. *Obviously, nothing in her plan would change if she had an extra \$30 million, \$100 million or \$1 billion.* Pretty stupid assumption, isn't it?

But this is exactly what is assumed and modeled in those "odds of success" plans.

Real wealth managers constantly manage wealth, not just these erroneous "odds of success" based on idiotic assumptions. *Chart two* and the table that follows it shows us the range of dollar values necessary for our widow to remain within 75-90% confidence over her life and the first five years of her plan, respectively.

Chart Two - dollar values necessary to avoid over and under funding.



Chance of Falling Outside of the Comfort Zone					
Next	Sacrifice (Over Funded)	Chance	Uncertain (Under Funded)	Chance	Outside
1 Year	\$120,278	22.5%	\$91,225	16.6%	39.1%
3 Years	\$131,719	36.3%	\$97,112	25.1%	61.4%
5 Years	\$139,258	45.6%	\$102,903	25.8%	71.4%

From the scale on the graph alone, you can observe that a wealth manager has quite a task set before him, managing billions of dollars of uncertainty into about a \$1 million range of outcomes over 80 years of uncertainty. The table shows **HOW UNLIKELY** it is that our widow's "highly confident" initial "odds of success" will play out. There is a 71.4% chance her wealth plan will become over or under funded within just the next five years! **There is no chance** (well...maybe if we ran a million simulations instead of a thousand there would be **SOME** chance) the market will behave in a manner that would not require a change in the plan at some point along the way and **only a 1 in 1,000 chance** that the markets will avoid the need to change the plan for 38 years (the longest simulated trial that avoided over and under funding.)

#### *No Confidence in Monte Carlo Confidence Levels*

I get emails all the time about fat tails, "Black Swans" and recently about how we don't need Monte Carlo to calculate "the odds of success." A recent article in the *Journal of Financial Planning* quoted my paper "[Understanding Monte Carlo Simulation](#)" to make a case for why compound returns are just as good of a measure of "odds of success" as Monte Carlo simulations. What was missed by the author was my main point from the paper that said, "... **to get to the highest possible confidence of achieving their goals. THIS IS AN ABUSE OF CLIENTS.**"

The confidence level of a Monte Carlo simulation (or a geometric mean confidence level for that matter) is not of much value by itself, unless you really would be stupid enough to make no use of an extra million or two that you happen to have lying around (something that is almost certain to happen at some point in any wealth management plan, that ignores spending, saving or asset allocation policy changes that would otherwise be prudent to address and something that a true wealth manager would do.)

Conversely, such confidence measures over life-long wealth management plans also assume you would completely ignore the reality that a black swan with a fat tail swooped down upon your wealth and carried much of it away.

While the author of that *Journal of Financial Planning* article<sup>4</sup> accurately represented that one can reasonably estimate with Monte Carlo simulation **or** Geometric mean method the odds of exceeding a certain dollar amount (his "odds of success") at *one date* in the future (based on the idiotic notion that no one would ever change their plan *based on dollar effect* to their plan along the way) he missed the key point that doing so is abusive to clients as I emphasized in the paper his article referenced.

This isn't meant to imply that there is anything wrong with Monte Carlo simulation confidence levels (or geometric mean confidence levels for that matter); instead it is the manner in which they are used that can be misleading, and painful to the ultimate client, an opinion we share with the author of the article, but for completely different reasons.

<sup>4</sup> Beyond Monte Carlo Analysis by Shawn Brayman, *Journal of Financial Planning*, December, 2007

### *The "High Confidence" With Practically No Chance of Happening*

In part two we examined the wealth results over eighty years of actual historical returns as applied to a 20 year old widow with an ongoing, inflation adjusted spending need. The wealth management approach of adjusting only the asset allocation based on an unchanging spending policy in reaction to funded status produced millions more wealth than clairvoyantly selected superior return based allocations. If one were to look at the confidence levels at the initial inception of a life long wealth management plan, is there a means of identifying *the odds of markets producing results over the life of the plan that would avoid becoming excessively over funded or under funded at any time over the entire plan?* Think about this question for a moment. The question being asked IS NOT what is initially shown as the confidence level, which, as it is normally used, represents the odds of meeting all of the client's goals over their life *and* ending up with an estate that is *larger* than their initial estate goal. In reality, that approach represents only two sample points - the start date of "now" and end date of death - and EVERYTHING that might happen in between is really ignored. Sure it models all of the cash flows and varying year by year market results (unless you are using a geometric mean method), but IT DOES NOT model what your confidence level would be in each year, of each trial. It assumes no action would be taken no matter WHAT the result, and you would keep everything unchanged until the plan end. How is that for unrealistic? In some trials you end up with massive amounts of excess wealth and you don't use it for anything. Sure, that is going to happen. In some you end up with excess wealth and you keep taking needless risks that ultimately are experienced in the form of losing money so you end up only close to your original goals. In some trials, devastating markets would have you close to the brink of "failure" but fortunate timing of a recovery gets you back to your original goals. And, in some trials, it assumes that the results are very poor and you go ahead and keep right on spending the same thing you planned on twenty years ago despite having a black swan with a fat tail carrying your wealth away.

If you think about this, what in essence most of those "odds of success" peddlers are saying is that, "You should trust me **now** because with your current goals and current assets and planned savings you have X% "odds of success" **based on the assumption that you ignore what your odds would be at any point in the future.**"

If as clients, we are expected to really and truly have some sense of comfort in the confidence levels ("odds of success") shown to us by our advisors (regardless of whether Monte Carlo or geometric mean based), shouldn't we also know the likelihood of whether the markets would produce results that would maintain us somewhere in that initial confidence range? Phrased another way, we might think of this as asking the question "despite the high odds of the initial advice, *how likely is it that the plan being modeled would not change* due ONLY to the behavior of markets over the life of the plan?" Or inversely, what are the odds of the markets being so well behaved the advisor would not be forced to change his advice if he were to remain consistent with his initial premises? It turns out the answer to this is knowable.

**DESPITE HIGH INITIAL ODDS, THE ODDS OF THE MARKETS BEHAVING IN A MANNER THAT WOULD NOT CAUSE AN ADVISOR TO CHANGE HIS ADVICE ARE NEAR ZERO.**

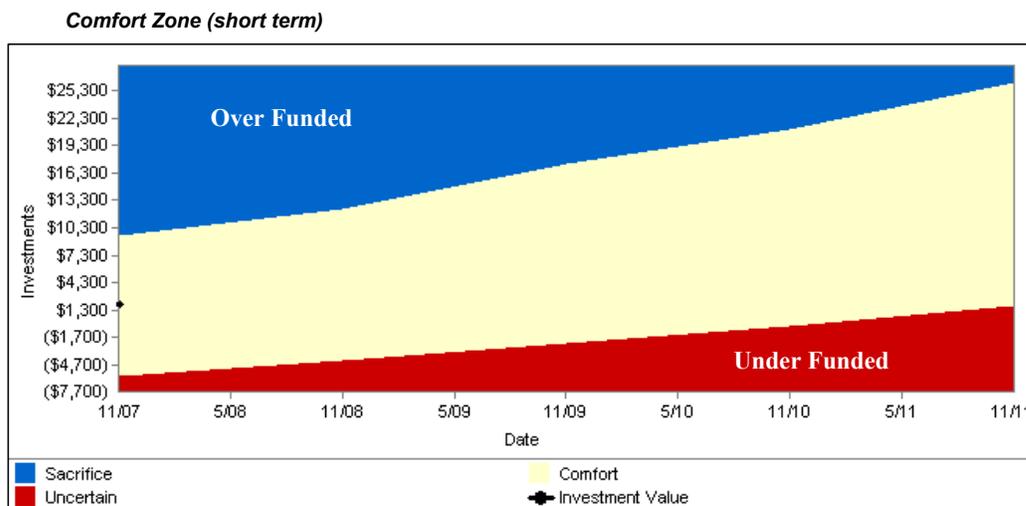
We saw this in the results for our widow. There was only a 1 in 1,000 chance of the markets behaving according to plan for 38 years and over a 71% chance the markets would behave in an unruly manner over the first five years of the plan. To a true wealth manager, you have to look at the short term misbehavior of markets to know this. You cannot calculate this behav-

ior by the smooth assumption of geometric means which may accurately represent the odds over the life of the presumably unchangeable plan, but you need Monte Carlo simulation to expose the dollar wealth effect of short term market behaviors. For example, assume the range of compound returns for our widow over 80 years was between 7.39% to 16.32% (see table 4) and if I created a geometric return distribution I would likely come to a statistical equivalent of our initial 83% confidence using a Monte Carlo simulation, just as the author of the *Journal of Financial Planning* article stated *over the entire life of the unchanging plan*. If I apply these compound returns to our widow for the first five years of the plan as it would be modeled with a geometric return method, it would mislead us into thinking there is no chance she would become under funded in the first five years. But with Monte Carlo simulation and the dollar impact of the short term uncertainty it exposes, we see there is a 25.8% chance of becoming under funded. There is a reasonable difference between zero chance and a 25% chance! We would become over funded with the maximum 16.32% geometric mean return in the first five years, but the short term impact of the Monte Carlo simulator showed us as having a 45% chance of becoming over funded. The return of 12.10% needed to become over funded using the geometric mean would have showed only about a 25% chance. The geometric mean method would therefore show only a 25% of becoming under or over funded while Monte Carlo simulation would show the odds being nearly THREE TIMES that level.

To be fair, you could reasonably estimate all of this using geometric means. To do so, you would have to calculate the distribution of returns for each year and year's end. Guess what, at that point it is the same thing as doing the Monte Carlo simulation!

Return managers sometimes discuss the notion of "risk capacity" even though they attempt to manage returns instead of wealth. Take for example another sample client. Like our widow in the previous example he also is twenty years old. Unlike the widow, who needs a continuous income, he is in savings mode, not spending mode, he saves \$2,000 a year adjusted for inflation and plans to retire at age 65 on \$29,000 in inflation adjusted income (about \$110,000 in actual dollars at age 65). Being young, with a lot of years of saving ahead of him, he can afford to take a lot of investment risk. If we run the initial confidence level based on our "Growth" model (90% equity exposure) we discover that he has 84% initial confidence and that there is almost no chance of falling outside of the comfort zone in the next five years; as shown in *Chart 3*, below.

*Chart 3 - Initial Comfort Zone for 20 year old Saver in 1926 with 84% confidence (FWC Growth allocation, 90% equities)*

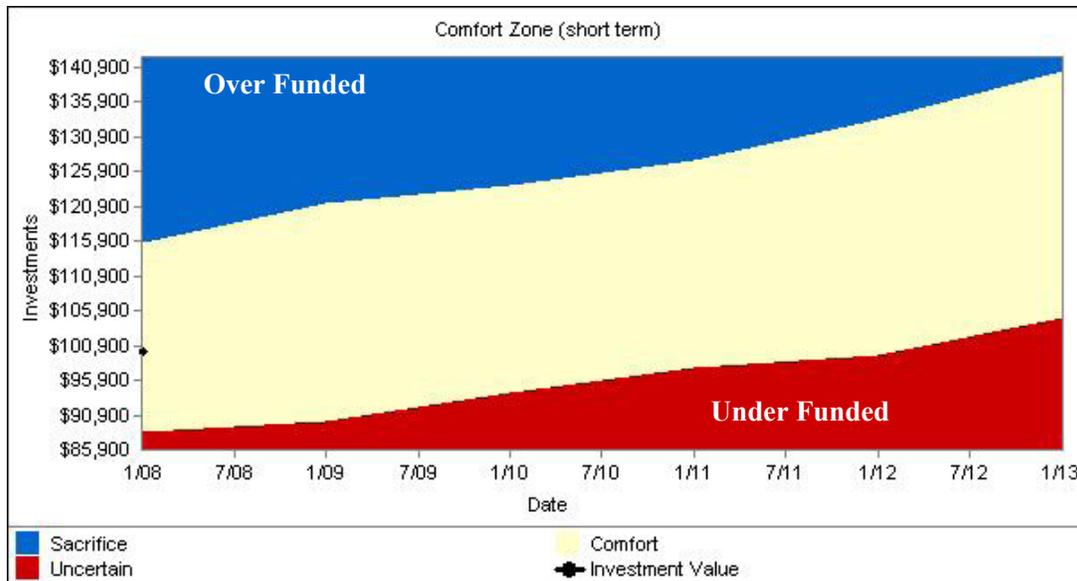


**Chance of Falling Outside of the Comfort Zone**

NEXT	Over funded SACRIFICE (ABOVE)	CHANCE	Under Funded UNCERTAIN (BELOW)	CHANCE	OUTSIDE
1 Year	\$12,365	0.0%	-\$4,225	0.0%	0.0%
3 Years	\$21,092	0.0%	-\$374	0.0%	0.0%
5 Years	\$31,498	0.6%	\$4,259	0.0%	0.6%

We see some pretty interesting things in the table of chances of falling out of the comfort zone over the next five years for this client shown in *Chart 3* and the table that follows it. For example, in the next three years, to fall below 75% confidence, he would have to lose 100% of each of his contributions AND be in debt \$374. Imagine how one would have to calculate this using geometric means! Five years into his plan, after having saved \$2,000 a year for 5 years adjusted for inflation (\$10,618), his portfolio would have to decline to \$4,259 to fall below 75% confidence. If you compare his ability to maintain his funded status in this obviously wide range of tolerance as compared to the sensitivity of our spending widow, we can clearly see what is often referred to as "risk capacity." Our saver has almost no chance of becoming over or under funded while the widow has more than a 71% chance of the markets behaving in a way that would cause an excessive funding variance in the next five years.

*Chart 4 - Initial Comfort Zone for 20 year old Widow in 1926 with 83% confidence (FWC - Balanced Growth Allocation - 80% Equities)*



Next	Sacrifice (Over Funded)	Chance	Uncertain (Under Funded)	Chance	Outside
1 Year	\$120,278	22.5%	\$91,225	16.6%	39.1%
3 Years	\$131,719	36.3%	\$97,112	25.1%	61.4%
5 Years	\$139,258	45.6%	\$102,903	25.8%	71.4%

The 20 year old "saver" has the capacity to compound at MINUS 100% for the first three years (plus be a bit in debt) and he would still have 75% confidence. Our widow would drop to 75% confidence if her compound return over the next three years was less than +2.27%. Do you think there is a difference here? Even though these allocations both have about the same odds of compounding at more than 2.27% (81% versus 83%) over three years, there is a

HUGE difference on the effect to the client's wealth management plan.

Even if we assume that the client would ignore the misbehavior of the markets over the entire eighty year horizon, we see the odds of our widow being close to her initial goals of meeting her inflation adjusted spending policy and maintaining the spending power of her portfolio have almost no chance of occurring.

At the 82nd percentile result, she would have an estate that is nearly **THREE TIMES** her target estate value, and at the 84th percentile, she would have run out of money at age 90. The 83rd percentile result would have left her with an estate worth about 50% more than she desired. How is this for long odds?

In part four we will examine the detailed supporting data of the timing of the allocation shifts based on the wealth management approach of monitoring the funded status for our widow versus the other clairvoyantly "successful" allocation methods from part two. We will also explore how sensitive the widow's wealth management plan is to just one year's investment result, and the timing of her husband's unfortunate death. Finally, we will provide the detailed back up of year by year values and returns for the allocations used in all of the part two examples.

## Part Four - The Data: Seeing the Effect of Real Markets on Client Goals

*"It is sheer madness to live in want in order to be wealthy when you die."*

*Juvenal*

In part one of this paper, we showed some simple examples of the effects of the difference between time weighted returns (return managers) versus dollar weighted (wealth manager) returns. Part two went through a real life client example and demonstrated how some of the "best" generally accepted and even clairvoyantly "successful" approaches of asset allocation ended up costing a widow investor millions of dollars of wealth. Part three examined how unlikely it is that markets would behave in a manner that would have avoided over and under funding, even though the initial odds were very high. It also exposed how sensitive a real wealth management plan is to the unique cash flows of the investor based on the risk capacity of the plan. Finally, it exposed how unrealistic and abusive Monte Carlo simulations (or geometric mean odds) can be to the client because of erroneous and impossible assumptions of the client sticking to their original plan, no matter what happens, despite equal odds of being broke, or a billionaire.

We released part two of this paper in an educational advisor email. Since its release I received a number of emails and phone calls asking for the documentation of the detailed data that supports the results for a real wealth management plan for our 20 year old widow example as well as the other four allocation methodologies we compared and contrasted in our example plan.

Before you analyze this information, it might be helpful to review what would have happened based on our original advice in 1926 that had high *initial* confidence. Keep in mind that a real wealth manager will not force/coerce or guilt the widow to stick with an old plan that becomes over or under funded based on the market's behavior. Instead, a real wealth manager monitors and offers continuous choices one should act on to increase or decrease funding or spending policy, target estate values, asset allocation policy, etc. Therefore, this example is not very realistic because it assumes that nothing is changed over the course of the widow's life *no matter* what happens, as discussed in part three. As a reminder, our 20 year old widow came to us in 1926 after her husband died in a mining accident. All she had was the proceeds of a \$100,000 insurance policy and an income need of \$5,000 a year (about \$50,000 in today's dollars) adjusted for inflation. She ended up living to age 100 so those insurance proceeds needed to provide for 80 years of income need.

Table 5

Initial Advice for Widow and History's Results								
Year	Widow's Age	Beginning Value	Spending Need	Return in \$	Return in %	Ending Value	Allocation	Equity Exposure
1926	20	\$ 100,000		\$ 7,496	7.50%	\$ 107,496	Bal Growth	80%
1927	21	\$ 107,496	\$ (5,000)	\$ 29,045	27.02%	\$ 131,540	Bal Growth	80%
1928	22	\$ 131,540	\$ (5,150)	\$ 44,915	34.15%	\$ 171,305	Bal Growth	80%
1929	23	\$ 171,305	\$ (5,305)	\$ (27,907)	-16.29%	\$ 138,094	Bal Growth	80%
1930	24	\$ 138,094	\$ (5,464)	\$ (30,343)	-21.97%	\$ 102,287	Bal Growth	80%
1931	25	\$ 102,287	\$ (5,628)	\$ (37,508)	-36.67%	\$ 59,151	Bal Growth	80%
1932	26	\$ 59,151	\$ (5,796)	\$ (2,513)	-4.25%	\$ 50,842	Bal Growth	80%
1933	27	\$ 50,842	\$ (5,970)	\$ 33,426	65.75%	\$ 78,298	Bal Growth	80%
1934	28	\$ 78,298	\$ (6,149)	\$ 5,391	6.88%	\$ 77,539	Bal Growth	80%
1935	29	\$ 77,539	\$ (6,334)	\$ 29,101	37.53%	\$ 100,306	Bal Growth	80%
1936	30	\$ 100,306	\$ (6,524)	\$ 35,519	35.41%	\$ 129,301	Bal Growth	80%
1937	31	\$ 129,301	\$ (6,720)	\$ (43,290)	-33.48%	\$ 79,292	Bal Growth	80%
1938	32	\$ 79,292	\$ (6,921)	\$ 20,963	26.44%	\$ 93,333	Bal Growth	80%
1939	33	\$ 93,333	\$ (7,129)	\$ 630	0.68%	\$ 86,835	Bal Growth	80%
1940	34	\$ 86,835	\$ (7,343)	\$ (5,329)	-6.14%	\$ 74,163	Bal Growth	80%
1941	35	\$ 74,163	\$ (7,563)	\$ (6,330)	-8.54%	\$ 60,270	Bal Growth	80%
1942	36	\$ 60,270	\$ (7,790)	\$ 13,662	22.67%	\$ 66,142	Bal Growth	80%
1943	37	\$ 66,142	\$ (8,024)	\$ 24,374	36.85%	\$ 82,493	Bal Growth	80%
1944	38	\$ 82,493	\$ (8,264)	\$ 20,313	24.62%	\$ 94,542	Bal Growth	80%
1945	39	\$ 94,542	\$ (8,512)	\$ 36,728	38.85%	\$ 122,758	Bal Growth	80%
1946	40	\$ 122,758	\$ (8,768)	\$ (8,787)	-7.16%	\$ 105,204	Bal Growth	80%
1947	41	\$ 105,204	\$ (9,031)	\$ 3,727	3.54%	\$ 99,899	Bal Growth	80%
1948	42	\$ 99,899	\$ (9,301)	\$ 2,844	2.85%	\$ 93,442	Bal Growth	80%
1949	43	\$ 93,442	\$ (9,581)	\$ 14,683	15.71%	\$ 98,544	Bal Growth	80%
1950	44	\$ 98,544	\$ (9,868)	\$ 26,882	27.28%	\$ 115,557	Bal Growth	80%
1951	45	\$ 115,557	\$ (10,164)	\$ 17,628	15.25%	\$ 123,022	Bal Growth	80%
1952	46	\$ 123,022	\$ (10,469)	\$ 13,761	11.19%	\$ 126,314	Bal Growth	80%
1953	47	\$ 126,314	\$ (10,783)	\$ (1,955)	-1.55%	\$ 113,576	Bal Growth	80%
1954	48	\$ 113,576	\$ (11,106)	\$ 50,642	44.59%	\$ 153,112	Bal Growth	80%
1955	49	\$ 153,112	\$ (11,440)	\$ 34,273	22.38%	\$ 175,945	Bal Growth	80%
1956	50	\$ 175,945	\$ (11,783)	\$ 8,181	4.65%	\$ 172,344	Bal Growth	80%
1957	51	\$ 172,344	\$ (12,136)	\$ (13,958)	-8.10%	\$ 146,249	Bal Growth	80%
1958	52	\$ 146,249	\$ (12,500)	\$ 58,310	39.87%	\$ 192,059	Bal Growth	80%
1959	53	\$ 192,059	\$ (12,875)	\$ 20,480	10.66%	\$ 199,664	Bal Growth	80%
1960	54	\$ 199,664	\$ (13,262)	\$ 3,204	1.60%	\$ 189,606	Bal Growth	80%
1961	55	\$ 189,606	\$ (13,660)	\$ 43,962	23.19%	\$ 219,909	Bal Growth	80%
1962	56	\$ 219,909	\$ (14,069)	\$ (14,778)	-6.72%	\$ 191,061	Bal Growth	80%
1963	57	\$ 191,061	\$ (14,491)	\$ 35,900	18.79%	\$ 212,470	Bal Growth	80%
1964	58	\$ 212,470	\$ (14,926)	\$ 33,453	15.74%	\$ 230,996	Bal Growth	80%
1965	59	\$ 230,996	\$ (15,374)	\$ 40,536	17.55%	\$ 256,158	Bal Growth	80%
1966	60	\$ 256,158	\$ (15,835)	\$ (16,263)	-6.35%	\$ 224,061	Bal Growth	80%
1967	61	\$ 224,061	\$ (16,310)	\$ 76,953	34.34%	\$ 284,703	Bal Growth	80%
1968	62	\$ 284,703	\$ (16,799)	\$ 45,544	16.00%	\$ 313,448	Bal Growth	80%
1969	63	\$ 313,448	\$ (17,303)	\$ (34,296)	-10.94%	\$ 261,848	Bal Growth	80%
1970	64	\$ 261,848	\$ (17,823)	\$ 2,645	1.01%	\$ 246,671	Bal Growth	80%
1971	65	\$ 246,671	\$ (18,357)	\$ 33,681	13.65%	\$ 261,995	Bal Growth	80%
1972	66	\$ 261,995	\$ (18,908)	\$ 32,883	12.55%	\$ 275,970	Bal Growth	80%
1973	67	\$ 275,970	\$ (19,475)	\$ (40,905)	-14.82%	\$ 215,590	Bal Growth	80%
1974	68	\$ 215,590	\$ (20,059)	\$ (39,581)	-18.36%	\$ 155,949	Bal Growth	80%
1975	69	\$ 155,949	\$ (20,661)	\$ 54,881	35.19%	\$ 190,169	Bal Growth	80%
1976	70	\$ 190,169	\$ (21,281)	\$ 56,815	29.88%	\$ 225,703	Bal Growth	80%
1977	71	\$ 225,703	\$ (21,920)	\$ 6,204	2.75%	\$ 209,987	Bal Growth	80%
1978	72	\$ 209,987	\$ (22,577)	\$ 21,512	10.24%	\$ 208,922	Bal Growth	80%
1979	73	\$ 208,922	\$ (23,254)	\$ 45,863	21.95%	\$ 231,531	Bal Growth	80%
1980	74	\$ 231,531	\$ (23,952)	\$ 66,514	28.73%	\$ 274,093	Bal Growth	80%
1981	75	\$ 274,093	\$ (24,671)	\$ 7,581	2.77%	\$ 257,004	Bal Growth	80%
1982	76	\$ 257,004	\$ (25,411)	\$ 62,258	24.22%	\$ 293,851	Bal Growth	80%
1983	77	\$ 293,851	\$ (26,173)	\$ 69,962	23.81%	\$ 337,641	Bal Growth	80%
1984	78	\$ 337,641	\$ (26,958)	\$ 15,192	4.50%	\$ 325,875	Bal Growth	80%
1985	79	\$ 325,875	\$ (27,767)	\$ 90,158	27.67%	\$ 388,266	Bal Growth	80%
1986	80	\$ 388,266	\$ (28,600)	\$ 57,153	14.72%	\$ 416,818	Bal Growth	80%
1987	81	\$ 416,818	\$ (29,458)	\$ 4,938	1.18%	\$ 392,298	Bal Growth	80%
1988	82	\$ 392,298	\$ (30,342)	\$ 63,509	16.19%	\$ 425,465	Bal Growth	80%
1989	83	\$ 425,465	\$ (31,252)	\$ 95,405	22.42%	\$ 489,619	Bal Growth	80%
1990	84	\$ 489,619	\$ (32,190)	\$ (25,595)	-5.23%	\$ 431,834	Bal Growth	80%
1991	85	\$ 431,834	\$ (33,155)	\$ 133,246	30.86%	\$ 531,925	Bal Growth	80%
1992	86	\$ 531,925	\$ (34,150)	\$ 60,748	11.42%	\$ 558,523	Bal Growth	80%
1993	87	\$ 558,523	\$ (35,174)	\$ 71,603	12.82%	\$ 594,952	Bal Growth	80%
1994	88	\$ 594,952	\$ (36,230)	\$ 3,853	0.65%	\$ 562,575	Bal Growth	80%
1995	89	\$ 562,575	\$ (37,317)	\$ 181,921	32.34%	\$ 707,179	Bal Growth	80%
1996	90	\$ 707,179	\$ (38,436)	\$ 124,313	17.58%	\$ 793,056	Bal Growth	80%
1997	91	\$ 793,056	\$ (39,589)	\$ 203,471	25.66%	\$ 956,938	Bal Growth	80%
1998	92	\$ 956,938	\$ (40,777)	\$ 151,453	15.83%	\$ 1,067,614	Bal Growth	80%
1999	93	\$ 1,067,614	\$ (42,000)	\$ 200,678	18.80%	\$ 1,226,292	Bal Growth	80%
2000	94	\$ 1,226,292	\$ (43,260)	\$ (43,215)	-3.52%	\$ 1,139,818	Bal Growth	80%
2001	95	\$ 1,139,818	\$ (44,558)	\$ (28,921)	-2.54%	\$ 1,066,339	Bal Growth	80%
2002	96	\$ 1,066,339	\$ (45,895)	\$ (155,299)	-14.56%	\$ 865,145	Bal Growth	80%
2003	97	\$ 865,145	\$ (47,271)	\$ 248,758	28.75%	\$ 1,066,631	Bal Growth	80%
2004	98	\$ 1,066,631	\$ (48,690)	\$ 130,091	12.20%	\$ 1,148,032	Bal Growth	80%
2005	99	\$ 1,148,032	\$ (50,150)	\$ 57,541	5.01%	\$ 1,155,423	Bal Growth	80%
2006	100	\$ 1,155,423	\$ (51,655)	\$ 153,001	13.24%	\$ 1,256,769	Bal Growth	80%

If we would have ignored the funded status along the way, things would have worked out just about perfectly according to plan, with just a little bit of excess money in spending power at

her death, despite a Great Depression that causes no reaction by the widow. But, what if her husband died one year earlier? How much impact would that have?

Table 6

Initial Advice for Widow and History's Results- Husband Passes One Year Earlier									
Year	Widow's Age	Beginning Value	Spending Need	Return in \$	Return in %	Ending Value	Allocation	Equity Exposure	
1926	20	\$ 100,000	\$ (5,000)	\$ 7,496	7.50%	\$ 102,495.51	Bal Growth	80%	
1927	21	\$ 102,496	\$ (5,150)	\$ 27,694	27.02%	\$ 125,039.46	Bal Growth	80%	
1928	22	\$ 125,039	\$ (5,305)	\$ 42,695	34.15%	\$ 162,429.87	Bal Growth	80%	
1929	23	\$ 162,430	\$ (5,464)	\$ (26,461)	-16.29%	\$ 130,505.06	Bal Growth	80%	
1930	24	\$ 130,505	\$ (5,628)	\$ (28,676)	-21.97%	\$ 96,201.58	Bal Growth	80%	
1931	25	\$ 96,202	\$ (5,796)	\$ (35,277)	-36.67%	\$ 55,128.37	Bal Growth	80%	
1932	26	\$ 55,128	\$ (5,970)	\$ (2,342)	-4.25%	\$ 46,816.16	Bal Growth	80%	
1933	27	\$ 46,816	\$ (6,149)	\$ 30,780	65.75%	\$ 71,446.51	Bal Growth	80%	
1934	28	\$ 71,447	\$ (6,334)	\$ 4,919	6.88%	\$ 70,031.65	Bal Growth	80%	
1935	29	\$ 70,032	\$ (6,524)	\$ 26,283	37.53%	\$ 89,791.23	Bal Growth	80%	
1936	30	\$ 89,791	\$ (6,720)	\$ 31,795	35.41%	\$ 114,866.96	Bal Growth	80%	
1937	31	\$ 114,867	\$ (6,921)	\$ (38,457)	-33.48%	\$ 69,488.45	Bal Growth	80%	
1938	32	\$ 69,488	\$ (7,129)	\$ 18,371	26.44%	\$ 80,730.81	Bal Growth	80%	
1939	33	\$ 80,731	\$ (7,343)	\$ 545	0.68%	\$ 73,933.45	Bal Growth	80%	
1940	34	\$ 73,933	\$ (7,563)	\$ (4,537)	-6.14%	\$ 61,833.14	Bal Growth	80%	
1941	35	\$ 61,833	\$ (7,790)	\$ (5,278)	-8.54%	\$ 48,765.63	Bal Growth	80%	
1942	36	\$ 48,766	\$ (8,024)	\$ 11,054	22.67%	\$ 51,796.25	Bal Growth	80%	
1943	37	\$ 51,796	\$ (8,264)	\$ 19,087	36.85%	\$ 62,619.42	Bal Growth	80%	
1944	38	\$ 62,619	\$ (8,512)	\$ 15,420	24.62%	\$ 69,526.80	Bal Growth	80%	
1945	39	\$ 69,527	\$ (8,768)	\$ 27,010	38.85%	\$ 87,769.43	Bal Growth	80%	
1946	40	\$ 87,769	\$ (9,031)	\$ (6,282)	-7.16%	\$ 72,456.62	Bal Growth	80%	
1947	41	\$ 72,457	\$ (9,301)	\$ 2,567	3.54%	\$ 65,721.70	Bal Growth	80%	
1948	42	\$ 65,722	\$ (9,581)	\$ 1,871	2.85%	\$ 58,011.90	Bal Growth	80%	
1949	43	\$ 58,012	\$ (9,868)	\$ 9,116	15.71%	\$ 57,259.47	Bal Growth	80%	
1950	44	\$ 57,259	\$ (10,164)	\$ 15,620	27.28%	\$ 62,715.32	Bal Growth	80%	
1951	45	\$ 62,715	\$ (10,469)	\$ 9,567	15.25%	\$ 61,813.61	Bal Growth	80%	
1952	46	\$ 61,814	\$ (10,783)	\$ 6,914	11.19%	\$ 57,945.09	Bal Growth	80%	
1953	47	\$ 57,945	\$ (11,106)	\$ (897)	-1.55%	\$ 45,941.91	Bal Growth	80%	
1954	48	\$ 45,942	\$ (11,440)	\$ 20,485	44.59%	\$ 54,987.22	Bal Growth	80%	
1955	49	\$ 54,987	\$ (11,783)	\$ 12,308	22.38%	\$ 55,512.78	Bal Growth	80%	
1956	50	\$ 55,513	\$ (12,136)	\$ 2,581	4.65%	\$ 45,957.75	Bal Growth	80%	
1957	51	\$ 45,958	\$ (12,500)	\$ (3,722)	-8.10%	\$ 29,735.15	Bal Growth	80%	
1958	52	\$ 29,735	\$ (12,875)	\$ 11,856	39.87%	\$ 28,715.31	Bal Growth	80%	
1959	53	\$ 28,715	\$ (13,262)	\$ 3,062	10.66%	\$ 18,515.72	Bal Growth	80%	
1960	54	\$ 18,516	\$ (13,660)	\$ 297	1.60%	\$ 5,153.34	Bal Growth	80%	
1961	55	\$ 5,153	\$ (14,069)	\$ 1,195	23.19%	<b>BROKE</b>	Bal Growth	80%	
1962	56	<b>BROKE</b>	\$ (14,491)	\$ 519	-6.72%		Bal Growth	80%	
1963	57		\$ (14,926)		18.79%		Bal Growth	80%	
1964	58		\$ (15,374)		15.74%		Bal Growth	80%	
1965	59		\$ (15,835)		17.55%		Bal Growth	80%	
1966	60		\$ (16,310)		-6.35%		Bal Growth	80%	
1967	61		\$ (16,799)		34.34%		Bal Growth	80%	
1968	62		\$ (17,303)		16.00%		Bal Growth	80%	
1969	63		\$ (17,823)		-10.94%		Bal Growth	80%	
1970	64		\$ (18,357)		1.01%		Bal Growth	80%	
1971	65		\$ (18,908)		13.65%		Bal Growth	80%	
1972	66		\$ (19,475)		12.55%		Bal Growth	80%	
1973	67		\$ (20,059)		-14.82%		Bal Growth	80%	
1974	68		\$ (20,661)		-18.36%		Bal Growth	80%	
1975	69		\$ (21,281)		35.19%		Bal Growth	80%	
1976	70		\$ (21,920)		29.88%		Bal Growth	80%	
1977	71		\$ (22,577)		2.75%		Bal Growth	80%	
1978	72		\$ (23,254)		10.24%		Bal Growth	80%	
1979	73		\$ (23,952)		21.95%		Bal Growth	80%	
1980	74		\$ (24,671)		28.73%		Bal Growth	80%	
1981	75		\$ (25,411)		2.77%		Bal Growth	80%	
1982	76		\$ (26,173)		24.22%		Bal Growth	80%	
1983	77		\$ (26,958)		23.81%		Bal Growth	80%	
1984	78		\$ (27,767)		4.50%		Bal Growth	80%	
1985	79		\$ (28,600)		27.67%		Bal Growth	80%	
1986	80		\$ (29,458)		14.72%		Bal Growth	80%	
1987	81		\$ (30,342)		1.18%		Bal Growth	80%	
1988	82		\$ (31,252)		16.19%		Bal Growth	80%	
1989	83		\$ (32,190)		22.42%		Bal Growth	80%	
1990	84		\$ (33,155)		-5.23%		Bal Growth	80%	
1991	85		\$ (34,150)		30.86%		Bal Growth	80%	
1992	86		\$ (35,174)		11.42%		Bal Growth	80%	
1993	87		\$ (36,230)		12.82%		Bal Growth	80%	
1994	88		\$ (37,317)		0.65%		Bal Growth	80%	
1995	89		\$ (38,436)		32.34%		Bal Growth	80%	
1996	90		\$ (39,589)		17.58%		Bal Growth	80%	
1997	91		\$ (40,777)		25.66%		Bal Growth	80%	
1998	92		\$ (42,000)		15.83%		Bal Growth	80%	
1999	93		\$ (43,260)		18.80%		Bal Growth	80%	
2000	94		\$ (44,558)		-3.52%		Bal Growth	80%	
2001	95		\$ (45,895)		-2.54%		Bal Growth	80%	
2002	96		\$ (47,271)		-14.56%		Bal Growth	80%	
2003	97		\$ (48,690)		28.75%		Bal Growth	80%	
2004	98		\$ (50,150)		12.20%		Bal Growth	80%	
2005	99		\$ (51,655)		5.01%		Bal Growth	80%	
2006	100		\$ (53,204)		13.24%		Bal Growth	80%	

Moving her income need just one year earlier had the widow broke at the same time as our "stocks for the long run" portfolio. Think about the effect of this. All we are doing is moving forward the \$5,000 income need by one year, the equivalent of a one time 5% under performance. Some may argue that one additional year of inflation adjusts all of the spending need, but, let's assume she could skip the first year inflation adjustment to remove that from the equation.

Table 7

Initial Advice for Widow and History's Results- Husband Passes One Year Earlier, Skip 1st Year Inflation Adj

Year	Widow's Age	Beginning Value	Spending Need	Return in \$	Return in %	Ending Value	Allocation	Equity Exposure
1926	20	\$ 100,000	\$ (5,000)	\$ 7,496	7.50%	\$ 102,495.51	Bal Growth	80%
1927	21	\$ 102,496	\$ (5,000)	\$ 27,694	27.02%	\$ 125,189.46	Bal Growth	80%
1928	22	\$ 125,189	\$ (5,150)	\$ 42,746	34.15%	\$ 162,785.59	Bal Growth	80%
1929	23	\$ 162,786	\$ (5,305)	\$ (26,519)	-16.29%	\$ 130,961.96	Bal Growth	80%
1930	24	\$ 130,962	\$ (5,464)	\$ (28,776)	-21.97%	\$ 96,722.00	Bal Growth	80%
1931	25	\$ 96,722	\$ (5,628)	\$ (35,468)	-36.67%	\$ 55,626.78	Bal Growth	80%
1932	26	\$ 55,627	\$ (5,796)	\$ (2,363)	-4.25%	\$ 47,467.29	Bal Growth	80%
1933	27	\$ 47,467	\$ (5,970)	\$ 31,208	65.75%	\$ 72,704.83	Bal Growth	80%
1934	28	\$ 72,705	\$ (6,149)	\$ 5,006	6.88%	\$ 71,561.09	Bal Growth	80%
1935	29	\$ 71,561	\$ (6,334)	\$ 26,857	37.53%	\$ 92,084.70	Bal Growth	80%
1936	30	\$ 92,085	\$ (6,524)	\$ 32,607	35.41%	\$ 118,168.26	Bal Growth	80%
1937	31	\$ 118,168	\$ (6,720)	\$ (39,563)	-33.48%	\$ 71,886.06	Bal Growth	80%
1938	32	\$ 71,886	\$ (6,921)	\$ 19,005	26.44%	\$ 83,969.93	Bal Growth	80%
1939	33	\$ 83,970	\$ (7,129)	\$ 567	0.68%	\$ 77,408.32	Bal Growth	80%
1940	34	\$ 77,408	\$ (7,343)	\$ (4,751)	-6.14%	\$ 65,315.04	Bal Growth	80%
1941	35	\$ 65,315	\$ (7,563)	\$ (5,575)	-8.54%	\$ 52,177.21	Bal Growth	80%
1942	36	\$ 52,177	\$ (7,790)	\$ 11,827	22.67%	\$ 56,214.87	Bal Growth	80%
1943	37	\$ 56,215	\$ (8,024)	\$ 20,716	36.85%	\$ 68,907.05	Bal Growth	80%
1944	38	\$ 68,907	\$ (8,264)	\$ 16,968	24.62%	\$ 77,610.64	Bal Growth	80%
1945	39	\$ 77,611	\$ (8,512)	\$ 30,151	38.85%	\$ 99,249.09	Bal Growth	80%
1946	40	\$ 99,249	\$ (8,768)	\$ (7,104)	-7.16%	\$ 83,377.62	Bal Growth	80%
1947	41	\$ 83,378	\$ (9,031)	\$ 2,953	3.54%	\$ 77,300.46	Bal Growth	80%
1948	42	\$ 77,300	\$ (9,301)	\$ 2,200	2.85%	\$ 70,199.29	Bal Growth	80%
1949	43	\$ 70,199	\$ (9,581)	\$ 11,031	15.71%	\$ 71,649.30	Bal Growth	80%
1950	44	\$ 71,649	\$ (9,868)	\$ 19,545	27.28%	\$ 81,326.59	Bal Growth	80%
1951	45	\$ 81,327	\$ (10,164)	\$ 12,406	15.25%	\$ 83,568.95	Bal Growth	80%
1952	46	\$ 83,569	\$ (10,469)	\$ 9,348	11.19%	\$ 82,448.02	Bal Growth	80%
1953	47	\$ 82,448	\$ (10,783)	\$ (1,276)	-1.55%	\$ 70,389.14	Bal Growth	80%
1954	48	\$ 70,389	\$ (11,106)	\$ 31,386	44.59%	\$ 90,668.37	Bal Growth	80%
1955	49	\$ 90,668	\$ (11,440)	\$ 20,295	22.38%	\$ 99,524.01	Bal Growth	80%
1956	50	\$ 99,524	\$ (11,783)	\$ 4,628	4.65%	\$ 92,368.94	Bal Growth	80%
1957	51	\$ 92,369	\$ (12,136)	\$ (7,481)	-8.10%	\$ 72,751.51	Bal Growth	80%
1958	52	\$ 72,752	\$ (12,500)	\$ 29,006	39.87%	\$ 89,257.54	Bal Growth	80%
1959	53	\$ 89,258	\$ (12,875)	\$ 9,518	10.66%	\$ 85,900.21	Bal Growth	80%
1960	54	\$ 85,900	\$ (13,262)	\$ 1,379	1.60%	\$ 74,017.08	Bal Growth	80%
1961	55	\$ 74,017	\$ (13,660)	\$ 17,162	23.19%	\$ 77,519.16	Bal Growth	80%
1962	56	\$ 77,519	\$ (14,069)	\$ (5,209)	-6.72%	\$ 58,240.46	Bal Growth	80%
1963	57	\$ 58,240	\$ (14,491)	\$ 10,943	18.79%	\$ 54,692.26	Bal Growth	80%
1964	58	\$ 54,692	\$ (14,926)	\$ 8,611	15.74%	\$ 48,377.24	Bal Growth	80%
1965	59	\$ 48,377	\$ (15,374)	\$ 8,489	17.55%	\$ 41,492.71	Bal Growth	80%
1966	60	\$ 41,493	\$ (15,835)	\$ (2,634)	-6.35%	\$ 23,023.32	Bal Growth	80%
1967	61	\$ 23,023	\$ (16,310)	\$ 7,907	34.34%	\$ 14,620.38	Bal Growth	80%
1968	62	\$ 14,620	\$ (16,799)	\$ 2,339	16.00%	\$ 159.72	Bal Growth	80%
1969	63	\$ 160	\$ (17,303)	\$ (17)	-10.94%	<b>BROKE</b>	Bal Growth	80%
1970	64	<b>BROKE</b>	\$ (17,823)		1.01%	Bal Growth	80%	
1971	65		\$ (18,357)		13.65%	Bal Growth	80%	
1972	66		\$ (18,908)		12.55%	Bal Growth	80%	
1973	67		\$ (19,475)		-14.82%	Bal Growth	80%	
1974	68		\$ (20,059)		-18.36%	Bal Growth	80%	
1975	69		\$ (20,661)		35.19%	Bal Growth	80%	
1976	70		\$ (21,281)		29.88%	Bal Growth	80%	
1977	71		\$ (21,920)		2.75%	Bal Growth	80%	
1978	72		\$ (22,577)		10.24%	Bal Growth	80%	
1979	73		\$ (23,254)		21.95%	Bal Growth	80%	
1980	74		\$ (23,952)		28.73%	Bal Growth	80%	
1981	75		\$ (24,671)		2.77%	Bal Growth	80%	
1982	76		\$ (25,411)		24.22%	Bal Growth	80%	
1983	77		\$ (26,173)		23.81%	Bal Growth	80%	
1984	78		\$ (26,958)		4.50%	Bal Growth	80%	
1985	79		\$ (27,767)		27.67%	Bal Growth	80%	
1986	80		\$ (28,600)		14.72%	Bal Growth	80%	
1987	81		\$ (29,458)		1.18%	Bal Growth	80%	
1988	82		\$ (30,342)		16.19%	Bal Growth	80%	
1989	83		\$ (31,252)		22.42%	Bal Growth	80%	
1990	84		\$ (32,190)		-5.23%	Bal Growth	80%	
1991	85		\$ (33,155)		30.86%	Bal Growth	80%	
1992	86		\$ (34,150)		11.42%	Bal Growth	80%	
1993	87		\$ (35,174)		12.82%	Bal Growth	80%	
1994	88		\$ (36,230)		0.65%	Bal Growth	80%	
1995	89		\$ (37,317)		32.34%	Bal Growth	80%	
1996	90		\$ (38,436)		17.58%	Bal Growth	80%	
1997	91		\$ (39,589)		25.66%	Bal Growth	80%	
1998	92		\$ (40,777)		15.83%	Bal Growth	80%	
1999	93		\$ (42,000)		18.80%	Bal Growth	80%	
2000	94		\$ (43,260)		-3.52%	Bal Growth	80%	
2001	95		\$ (44,558)		-2.54%	Bal Growth	80%	
2002	96		\$ (45,895)		-14.56%	Bal Growth	80%	
2003	97		\$ (47,271)		28.75%	Bal Growth	80%	
2004	98		\$ (48,690)		12.20%	Bal Growth	80%	
2005	99		\$ (50,150)		5.01%	Bal Growth	80%	
2006	100		\$ (51,655)		13.24%	Bal Growth	80%	

Skipping a 3% inflation adjustment to our widow's spending need ONCE over the course of the last 80 years delayed the depletion of her portfolio by eight years. THIS is why wealth managers constantly tweak their advice. It is also why I get so frustrated with active RETURN managers that argue they should measure temperature with a ruler. **The difference of a one time 5% under performance was the difference between her maintaining the spending policy over her entire life along with maintaining the purchasing power of her portfolio versus being broke 44 years earlier! Can you afford to take that risk?**

Any attempt to exceed the market's results will introduce a risk of potentially under performing as well, and as we can see from the example above, just ONE YEAR of inferior results can cost you 44 YEARS of lifestyle, depending on *when* it happens. Out performing *could* also buy you a superior lifestyle, PROVIDED that you act upon it and do not introduce the risk of under performing after having received the benefit of your lucky or skillful superior results. However, return managers cannot control WHEN superior or inferior results will occur. That is why they measure and manage returns, and NOT wealth. So why take these bets in the first place if you don't need to? The real wealth manager does not.

We see this effect in our original case study where a *return manager* outperforming by 1.5% a year with certainty each and every year (no risk of under performing the benchmark in ANY year) ended up costing the widow millions. Contrast this to a wealth manager who adjusted only the allocation based on funded status in a portfolio that only equaled the index results.

Remember that all of these results are fictitious from the perspective of a real wealth manager because the ONLY thing that is changed is the allocation risk-level of the investment policy. Real wealth managers would treat the wealth management plan like a prudent pension fiduciary would, adjusting funding, spending, terminal values and allocation in various combinations in a continuous advising process based upon what the investor personally values.

We also know that despite using real historical returns, none of the scenarios where the widow "went broke" would have actually occurred either. The widow would have intuitively become more conservative in her spending policy and adjusted her lifestyle with or without a wealth manager to guide the way. But, such scare tactics do help return managers maximize the fees they can earn on excessively large portfolios!

If we look at *exhibit one*, that documents the returns, dollar values, and spending need used in all of the calculations as well as the confidence levels and the nine shifts of allocation policy that would have been made along the way for our widow (erroneously assuming the only choice exposed was allocation policy), we see some interesting things.

First, one might observe that despite the multi-billion dollar range of uncertainty we exposed in part three with a forever unchanging allocation and spending policy, we see that there were only two years in the last eighty (widow's age 27 and 28 during the Great Depression) where the confidence level for the plan couldn't be adjusted to targeted adequate funding levels by shifting *only* the asset allocation (other than the over funding periods in the last 60 years). Clearly in such an environment, the spending policy would, and SHOULD be adjusted.

Exhibit one - Wealth Management Allocation ONLY Shifts for Widow

Widow's Age	Beginning Value	Spending Need	Return in \$	Return in %	Year End Value	Change to This FWC Allocation at Year End	Confidence Level	Level on New Allocation	Equity Exposure
21	\$ 100,000	\$ (5,000)	\$ 7,496	7.50%	\$ 102,496	Bal Growth	83		80%
22	\$ 102,496	\$ (5,150)	\$ 27,694	27.02%	\$ 125,039	Bal Growth	84		80%
23	\$ 125,039	\$ (5,305)	\$ 24,602	19.68%	\$ 144,337	Bal Income	91	83	45%
24	\$ 144,337	\$ (5,464)	\$ (3,949)	-2.74%	\$ 134,924	Risk Averse	92	83	30%
25	\$ 134,924	\$ (5,628)	\$ (13,105)	-9.71%	\$ 116,191	Bal Income	73	86	45%
26	\$ 116,191	\$ (5,796)	\$ (42,607)	-36.67%	\$ 67,788	Bal Growth	68	83	80%
27	\$ 67,788	\$ (5,970)	\$ (4,794)	-7.07%	\$ 57,024	Aggressive	35	50	100%
28	\$ 57,024	\$ (6,149)	\$ 51,060	89.54%	\$ 101,934	Aggressive	31		100%
29	\$ 101,934	\$ (6,334)	\$ 8,994	8.82%	\$ 104,595	Aggressive	75		100%
30	\$ 104,595	\$ (6,524)	\$ 46,732	44.68%	\$ 144,802	Aggressive	77		100%
31	\$ 144,802	\$ (6,720)	\$ 67,003	46.27%	\$ 205,086	Aggressive	88		100%
32	\$ 205,086	\$ (6,921)	\$ (24,283)	-11.84%	\$ 173,882	Risk Averse	97	94	30%
33	\$ 173,882	\$ (7,129)	\$ 23,023	13.24%	\$ 189,776	Risk Averse	78		30%
34	\$ 189,776	\$ (7,343)	\$ 5,065	2.67%	\$ 187,499	Risk Averse	83		30%
35	\$ 187,499	\$ (7,563)	\$ (1,303)	-0.70%	\$ 178,633	Risk Averse	80		30%
36	\$ 178,633	\$ (7,790)	\$ (8,176)	-4.58%	\$ 162,667	Bal Income	71	85	45%
37	\$ 162,667	\$ (8,024)	\$ 28,893	17.76%	\$ 183,536	Balanced	72	81	60%
38	\$ 183,536	\$ (8,264)	\$ 53,381	29.08%	\$ 228,653	Balanced	87		60%
39	\$ 228,653	\$ (8,512)	\$ 23,855	10.43%	\$ 243,996	Risk Averse	95	87	30%
40	\$ 243,996	\$ (8,768)	\$ 39,070	16.01%	\$ 274,299	Risk Averse	90		30%
41	\$ 274,299	\$ (9,031)	\$ (5,867)	-2.14%	\$ 259,402	Risk Averse	95		30%
42	\$ 259,402	\$ (9,301)	\$ 4,747	1.83%	\$ 254,847	Risk Averse	91		30%
43	\$ 254,847	\$ (9,581)	\$ 5,298	2.08%	\$ 250,564	Risk Averse	89		30%
44	\$ 250,564	\$ (9,868)	\$ 18,135	7.24%	\$ 258,831	Risk Averse	84		30%
45	\$ 258,831	\$ (10,164)	\$ 27,844	10.76%	\$ 276,511	Risk Averse	86		30%
46	\$ 276,511	\$ (10,469)	\$ 16,453	5.95%	\$ 282,495	Risk Averse	89		30%
47	\$ 282,495	\$ (10,783)	\$ 14,469	5.12%	\$ 286,180	Risk Averse	89		30%
48	\$ 286,180	\$ (11,106)	\$ 3,650	1.28%	\$ 278,723	Risk Averse	89		30%
49	\$ 278,723	\$ (11,440)	\$ 50,947	18.28%	\$ 318,231	Risk Averse	85		30%
50	\$ 318,231	\$ (11,783)	\$ 25,852	8.12%	\$ 332,300	Risk Averse	92		30%
51	\$ 332,300	\$ (12,136)	\$ 5,758	1.73%	\$ 325,922	Risk Averse	93		30%
52	\$ 325,922	\$ (12,500)	\$ 4,574	1.40%	\$ 317,996	Risk Averse	91		30%
53	\$ 317,996	\$ (12,875)	\$ 46,244	14.54%	\$ 351,365	Risk Averse	90		30%
54	\$ 351,365	\$ (13,262)	\$ 14,377	4.09%	\$ 352,480	Risk Averse	93		30%
55	\$ 352,480	\$ (13,660)	\$ 24,972	7.08%	\$ 363,793	Risk Averse	92		30%
56	\$ 363,793	\$ (14,069)	\$ 36,047	9.91%	\$ 385,771	Risk Averse	92		30%
57	\$ 385,771	\$ (14,491)	\$ 2,607	0.68%	\$ 373,887	Risk Averse	95		30%
58	\$ 373,887	\$ (14,926)	\$ 30,707	8.21%	\$ 389,667	Risk Averse	91		30%
59	\$ 389,667	\$ (15,374)	\$ 32,843	8.43%	\$ 407,136	Risk Averse	95		30%
60	\$ 407,136	\$ (15,835)	\$ 31,225	7.67%	\$ 422,526	Risk Averse	96		30%
61	\$ 422,526	\$ (16,310)	\$ 2,429	0.57%	\$ 408,645	Risk Averse	96		30%
62	\$ 408,645	\$ (16,799)	\$ 57,939	14.18%	\$ 449,784	Risk Averse	93		30%
63	\$ 449,784	\$ (17,303)	\$ 40,710	9.05%	\$ 473,190	Risk Averse	97		30%
64	\$ 473,190	\$ (17,823)	\$ (18,879)	-3.99%	\$ 436,489	Risk Averse	98		30%
65	\$ 436,489	\$ (18,357)	\$ 42,888	9.83%	\$ 461,020	Risk Averse	93		30%
66	\$ 461,020	\$ (18,908)	\$ 46,948	10.18%	\$ 489,060	Risk Averse	95		30%
67	\$ 489,060	\$ (19,475)	\$ 37,747	7.72%	\$ 507,332	Risk Averse	98		30%
68	\$ 507,332	\$ (20,059)	\$ (13,018)	-2.57%	\$ 474,254	Risk Averse	99		30%
69	\$ 474,254	\$ (20,661)	\$ (14,578)	-3.07%	\$ 439,014	Risk Averse	96		30%
70	\$ 439,014	\$ (21,281)	\$ 79,028	18.00%	\$ 496,761	Risk Averse	90		30%
71	\$ 496,761	\$ (21,920)	\$ 93,075	18.74%	\$ 567,917	Risk Averse	96		30%
72	\$ 567,917	\$ (22,577)	\$ 13,952	2.46%	\$ 559,292	Risk Averse	99		30%
73	\$ 559,292	\$ (23,254)	\$ 36,176	6.47%	\$ 572,214	Risk Averse	99		30%
74	\$ 572,214	\$ (23,952)	\$ 65,966	11.53%	\$ 614,228	Risk Averse	99		30%
75	\$ 614,228	\$ (24,671)	\$ 85,627	13.94%	\$ 675,184	Risk Averse	100		30%
76	\$ 675,184	\$ (25,411)	\$ 50,975	7.55%	\$ 700,749	Risk Averse	100		30%
77	\$ 700,749	\$ (26,173)	\$ 179,354	25.59%	\$ 853,930	Risk Averse	100		30%
78	\$ 853,930	\$ (26,958)	\$ 117,784	13.79%	\$ 944,756	Risk Averse	100		30%
79	\$ 944,756	\$ (27,767)	\$ 94,309	9.98%	\$ 1,011,297	Risk Averse	100		30%
80	\$ 1,011,297	\$ (28,600)	\$ 221,160	21.87%	\$ 1,203,857	Risk Averse	100		30%
81	\$ 1,203,857	\$ (29,458)	\$ 169,492	14.08%	\$ 1,343,890	Risk Averse	100		30%
82	\$ 1,343,890	\$ (30,342)	\$ 32,325	2.41%	\$ 1,345,874	Risk Averse	100		30%
83	\$ 1,345,874	\$ (31,252)	\$ 133,851	9.95%	\$ 1,448,473	Risk Averse	100		30%
84	\$ 1,448,473	\$ (32,190)	\$ 233,575	16.13%	\$ 1,649,858	Risk Averse	100		30%
85	\$ 1,649,858	\$ (33,155)	\$ 63,169	3.83%	\$ 1,679,871	Risk Averse	100		30%
86	\$ 1,679,871	\$ (34,150)	\$ 342,864	20.41%	\$ 1,988,585	Risk Averse	100		30%
87	\$ 1,988,585	\$ (35,174)	\$ 169,701	8.53%	\$ 2,123,111	Risk Averse	100		30%
88	\$ 2,123,111	\$ (36,230)	\$ 236,288	11.13%	\$ 2,323,170	Risk Averse	100		30%
89	\$ 2,323,170	\$ (37,317)	\$ (49,343)	-2.12%	\$ 2,236,511	Risk Averse	100		30%
90	\$ 2,236,511	\$ (38,436)	\$ 482,447	21.57%	\$ 2,680,522	Risk Averse	100		30%
91	\$ 2,680,522	\$ (39,589)	\$ 218,691	8.16%	\$ 2,859,624	Risk Averse	100		30%
92	\$ 2,859,624	\$ (40,777)	\$ 414,742	14.50%	\$ 3,233,590	Risk Averse	100		30%
93	\$ 3,233,590	\$ (42,000)	\$ 374,943	11.60%	\$ 3,566,533	Risk Averse	100		30%
94	\$ 3,566,533	\$ (43,260)	\$ 235,149	6.59%	\$ 3,758,422	Risk Averse	100		30%
95	\$ 3,758,422	\$ (44,558)	\$ 224,077	5.96%	\$ 3,937,941	Risk Averse	100		30%
96	\$ 3,937,941	\$ (45,895)	\$ 69,442	1.76%	\$ 3,961,488	Risk Averse	100		30%
97	\$ 3,961,488	\$ (47,271)	\$ 136,117	3.44%	\$ 4,050,334	Risk Averse	100		30%
98	\$ 4,050,334	\$ (48,690)	\$ 461,252	11.39%	\$ 4,462,896	Risk Averse	100		30%
99	\$ 4,462,896	\$ (50,150)	\$ 335,699	7.52%	\$ 4,748,445	Risk Averse	100		30%
100	\$ 4,748,445	\$ (51,655)	\$ 181,732	3.83%	\$ 4,878,522	Risk Averse	100		30%

We also observe how unrealistic this is, because it assumes the widow wouldn't adjust her spending at the young age of 59, despite having excessive confidence and a spending need of only 3.7% of the CURRENT portfolio value. It only gets worse from there. By age 80 she would only be spending 2.8% of the portfolio value and by age 99 she would be at only 1%. In reality, a *real wealth manager* would have told her to spend more.

Of course, this is what would happen if people really never thought about things, but they do, which is what makes an assumption there would be no adjustments over a lifetime so unrealistic.

So, what were the returns and portfolio values for the other allocation choices? Was it a Black Swan with a fat tail that swooped down upon the portfolio that caused most of the other allocation choices to "fail?" Was there an outlier in the bell curve (by the way, our bell is warped because we use a log normal distribution, not a normal distribution) that caused the other allocations to "fail," like our initial plan would have if the timing of her husband's death moved by only one year?

*Exhibit two* shows us the returns for each year, for the five allocation choices for our widow. One would notice in the shaded area that there **were not** outlier returns immediately preceding the time periods where the widow ran out of money with these choices. Well...maybe there were outliers, but they were more likely to the upside, not downside. The **WORST** loss of any of these portfolios in the shaded area was a 100% stock allocation with a 10.78% decline. That is hardly a "Black Swan." **Two of the seven years before the widow ran out of money with the "#1-Stocks for the Long Run" allocation, she would have experienced returns of more than 40%!**

*Exhibit two - Returns for the allocation choices*

Asset Allocation Alternatives- Returns					
Widow's Age	#1- Long Term (Risk "Tolerance") Allocation	#2- Age Based Allocation (Target Date)	#3- Stocks for the Long Run	#4- Superior Selection	#5- Wealth Management Allocation
21	5.96%	6.68%	11.62%	7.46%	7.50%
22	14.55%	25.66%	37.49%	16.05%	27.02%
23	16.45%	33.08%	43.61%	17.95%	19.68%
24	-5.90%	-18.36%	-8.42%	-4.40%	-2.74%
25	-7.28%	-21.47%	-24.90%	-5.78%	-9.71%
26	-18.59%	-34.91%	-43.34%	-17.09%	-36.67%
27	2.61%	-3.18%	-8.19%	4.11%	-7.07%
28	34.73%	65.81%	53.99%	36.23%	89.54%
29	8.67%	8.61%	-1.44%	10.17%	8.82%
30	20.95%	33.55%	47.67%	22.45%	44.68%
31	19.20%	33.22%	33.92%	20.70%	46.27%
32	-15.67%	-30.07%	-35.03%	-14.17%	-11.84%
33	15.64%	23.43%	31.12%	17.14%	13.24%
34	2.65%	1.29%	-0.41%	4.15%	2.67%
35	-1.22%	-4.32%	-9.78%	0.28%	-0.70%
36	-3.67%	-6.70%	-11.59%	-2.17%	-4.58%
37	12.43%	19.85%	20.34%	13.93%	17.76%
38	<b>20.80%</b>	<b>33.03%</b>	<b>25.90%</b>	<b>22.30%</b>	<b>29.08%</b>
39	13.60%	21.31%	19.75%	15.10%	10.43%
40	<b>20.60%</b>	<b>32.11%</b>	<b>36.44%</b>	<b>22.10%</b>	<b>16.01%</b>
41	-2.96%	-5.31%	-8.07%	-1.46%	-2.14%
42	1.98%	2.60%	5.71%	3.48%	1.83%
43	2.05%	2.17%	5.50%	3.55%	2.08%
44	8.62%	11.89%	18.79%	10.12%	7.24%
45	13.42%	19.66%	31.71%	14.92%	10.76%
46	6.85%	9.84%	24.02%	8.35%	5.95%
47	5.61%	7.36%	18.37%	7.11%	5.12%
48	0.78%	-0.21%	-0.99%	2.28%	1.28%
49	22.58%	30.25%	52.62%	24.08%	18.28%
50	9.85%	13.58%	31.56%	11.35%	8.12%
51	1.94%	2.70%	6.56%	3.44%	1.73%
52	0.13%	-2.17%	-10.78%	1.63%	1.40%
53	18.80%	24.36%	43.36%	20.30%	14.54%
54	5.01%	6.35%	11.96%	6.51%	4.09%
55	6.68%	5.60%	0.47%	8.18%	7.08%
56	12.04%	14.06%	26.89%	13.54%	9.91%
57	-0.37%	-1.37%	-8.73%	1.13%	0.68%
58	9.75%	10.92%	22.80%	11.25%	8.21%
59	9.76%	10.44%	16.48%	11.26%	8.43%
60	9.80%	10.60%	12.45%	11.30%	7.67%
61	-0.39%	-0.72%	-10.06%	1.11%	0.57%
62	18.69%	19.36%	23.98%	20.19%	14.18%
63	10.75%	10.82%	11.06%	12.25%	9.05%
64	-5.92%	-5.84%	-8.50%	-4.42%	-3.99%
65	8.50%	8.83%	4.01%	10.00%	9.83%
66	11.02%	10.85%	14.31%	12.52%	10.18%
67	8.12%	7.84%	18.98%	9.62%	7.72%
68	-5.00%	-3.83%	-14.66%	-3.50%	-2.57%
69	-5.34%	-3.70%	-26.47%	-3.84%	-3.07%
70	21.15%	18.81%	37.20%	22.65%	18.00%
71	21.80%	19.95%	23.84%	23.30%	18.74%
72	3.18%	2.80%	-7.18%	4.68%	2.46%
73	7.29%	6.35%	6.56%	8.79%	6.47%
74	13.43%	10.86%	18.44%	14.93%	11.53%
75	15.96%	12.32%	32.42%	17.46%	13.94%
76	7.04%	7.90%	-4.91%	8.54%	7.55%
77	26.64%	27.33%	21.41%	28.14%	25.59%
78	15.70%	12.50%	22.51%	17.20%	13.79%
79	9.04%	11.05%	6.27%	10.54%	9.98%
80	23.27%	21.81%	32.16%	24.77%	21.87%
81	14.38%	14.61%	18.47%	15.88%	14.08%
82	1.67%	2.32%	5.23%	3.17%	2.41%
83	11.04%	8.47%	16.81%	12.54%	9.95%
84	16.78%	14.79%	31.49%	18.28%	16.13%
85	2.06%	6.43%	-3.17%	3.56%	3.83%
86	22.95%	18.27%	30.55%	24.45%	20.41%
87	9.62%	8.02%	7.67%	11.12%	8.53%
88	12.17%	11.40%	9.99%	13.67%	11.13%
89	-2.18%	-4.01%	1.31%	-0.68%	-2.12%
90	23.77%	18.60%	37.43%	25.27%	21.57%
91	9.25%	4.07%	23.07%	10.75%	8.16%
92	16.08%	10.15%	33.36%	17.58%	14.50%
93	11.56%	10.37%	28.58%	13.06%	11.60%
94	8.31%	0.26%	21.04%	9.81%	6.59%
95	5.07%	11.22%	-9.11%	6.57%	5.96%
96	1.76%	3.74%	-11.88%	3.26%	1.76%
97	1.57%	14.42%	-22.10%	3.07%	3.44%
98	14.61%	1.80%	28.69%	16.11%	11.39%
99	8.73%	5.27%	10.87%	10.23%	7.52%
100	4.06%	3.12%	4.89%	5.56%	3.83%

In *Exhibit three* we can observe the DOLLAR impact of these returns on the widow's wealth.

*Exhibit three - Widow's portfolio value based on each of the allocation policy choices*

Asset Allocation Alternatives- Portfolio Values					
Widow's Age	#1- Long Term (Risk "Tolerance") Allocation	#2- Age Based Allocation (Target Date)	#3- Stocks for the Long Run	# 4- Superior Selection	#5- Wealth Management Allocation
21	\$ 100,955	\$ 101,680	\$ 106,624	\$ 102,455	\$ 102,496
22	\$ 110,496	\$ 122,621	\$ 141,446	\$ 113,751	\$ 125,039
23	\$ 123,364	\$ 157,874	\$ 197,823	\$ 128,861	\$ 144,337
24	\$ 110,626	\$ 123,423	\$ 175,712	\$ 117,732	\$ 134,924
25	\$ 96,946	\$ 91,300	\$ 126,338	\$ 105,300	\$ 116,191
26	\$ 73,128	\$ 53,634	\$ 65,791	\$ 81,509	\$ 67,788
27	\$ 69,066	\$ 45,960	\$ 54,431	\$ 78,888	\$ 57,024
28	\$ 86,903	\$ 70,058	\$ 77,668	\$ 101,319	\$ 101,934
29	\$ 88,100	\$ 69,754	\$ 70,214	\$ 105,286	\$ 104,595
30	\$ 100,035	\$ 86,631	\$ 97,160	\$ 122,401	\$ 144,802
31	\$ 112,526	\$ 108,692	\$ 123,399	\$ 141,022	\$ 205,086
32	\$ 87,967	\$ 69,092	\$ 73,255	\$ 114,112	\$ 173,882
33	\$ 94,600	\$ 78,148	\$ 88,925	\$ 126,547	\$ 189,776
34	\$ 89,764	\$ 71,810	\$ 81,217	\$ 124,456	\$ 187,499
35	\$ 81,106	\$ 61,147	\$ 65,707	\$ 117,242	\$ 178,633
36	\$ 70,341	\$ 49,260	\$ 50,300	\$ 106,909	\$ 162,667
37	\$ 71,061	\$ 51,015	\$ 52,508	\$ 113,779	\$ 183,536
38	\$ 77,574	\$ 59,599	\$ 57,843	\$ 130,882	\$ 228,653
39	\$ 79,612	\$ 63,787	\$ 60,757	\$ 142,134	\$ 243,996
40	\$ 87,245	\$ 75,498	\$ 74,127	\$ 164,779	\$ 274,299
41	\$ 75,634	\$ 62,456	\$ 59,113	\$ 153,346	\$ 259,402
42	\$ 67,830	\$ 54,777	\$ 53,186	\$ 149,381	\$ 254,847
43	\$ 59,637	\$ 46,385	\$ 46,531	\$ 145,096	\$ 250,564
44	\$ 54,908	\$ 42,033	\$ 45,408	\$ 149,907	\$ 258,831
45	\$ 52,113	\$ 40,132	\$ 49,644	\$ 162,112	\$ 276,511
46	\$ 45,212	\$ 33,612	\$ 51,098	\$ 165,171	\$ 282,495
47	\$ 36,967	\$ 25,302	\$ 49,700	\$ 166,140	\$ 286,180
48	\$ 26,148	\$ 14,142	\$ 38,102	\$ 158,819	\$ 278,723
49	\$ 20,614	\$ 6,980	\$ 46,713	\$ 185,627	\$ 318,231
50	\$ 10,861	BROKE	\$ 49,674	\$ 194,904	\$ 332,300
51	BROKE		\$ 40,794	\$ 189,481	\$ 325,922
52			\$ 23,895	\$ 180,077	\$ 317,996
53			\$ 21,382	\$ 203,762	\$ 351,365
54			\$ 10,676	\$ 203,774	\$ 352,480
55		BROKE	\$ 206,781	\$ 363,793	
56			\$ 220,719	\$ 385,771	
57			\$ 208,729	\$ 373,887	
58			\$ 217,282	\$ 389,667	
59			\$ 226,370	\$ 407,136	
60			\$ 236,121	\$ 422,526	
61			\$ 222,426	\$ 408,645	
62			\$ 250,525	\$ 449,784	
63			\$ 263,909	\$ 473,190	
64			\$ 234,419	\$ 436,489	
65			\$ 239,503	\$ 461,020	
66			\$ 250,580	\$ 489,060	
67			\$ 255,223	\$ 507,332	
68			\$ 226,225	\$ 474,254	
69			\$ 196,877	\$ 439,014	
70			\$ 220,186	\$ 496,761	
71			\$ 249,562	\$ 567,917	
72			\$ 238,673	\$ 559,292	
73			\$ 236,401	\$ 572,214	
74			\$ 247,746	\$ 614,228	
75			\$ 266,328	\$ 675,184	
76			\$ 263,661	\$ 700,749	
77			\$ 311,692	\$ 853,930	
78			\$ 338,345	\$ 944,756	
79			\$ 346,232	\$ 1,011,297	
80			\$ 403,391	\$ 1,203,857	
81			\$ 437,974	\$ 1,343,890	
82			\$ 421,524	\$ 1,345,874	
83			\$ 443,142	\$ 1,448,473	
84			\$ 491,939	\$ 1,649,858	
85			\$ 476,312	\$ 1,679,871	
86			\$ 558,618	\$ 1,988,585	
87			\$ 585,539	\$ 2,123,111	
88			\$ 629,358	\$ 2,323,170	
89			\$ 587,768	\$ 2,236,511	
90			\$ 697,842	\$ 2,680,522	
91			\$ 733,293	\$ 2,859,624	
92			\$ 821,423	\$ 3,233,590	
93			\$ 886,667	\$ 3,566,533	
94			\$ 930,359	\$ 3,758,422	
95			\$ 946,901	\$ 3,937,941	
96			\$ 931,920	\$ 3,961,488	
97			\$ 913,283	\$ 4,050,334	
98			\$ 1,011,722	\$ 4,462,896	
99			\$ 1,065,108	\$ 4,748,445	
100			\$ 1,072,678	\$ 4,878,522	

So what does all of this data mean? Does it mean that we will always produce more wealth with a *real wealth management* approach as opposed to a *return management* approach? NO, it doesn't. In retrospect there will always be better decisions that could have been made. That does not make it rational to project making superior decisions in the future while ignoring the uncertainty such decisions introduce.

Does it mean that measuring and managing funded status is a better "market timing" strategy that produces superior returns? NO, it doesn't, because the funded status is unique to each individual's cash flows *and risk capacity* and in reality there will be many more changes made than just the asset allocation.

This merely means there is a vast amount of uncertainty in the market's behavior. Think about the multi-billion dollar range of uncertainty for our widow with \$100,000. *When* different results occur affects different people in different ways, sometimes with no effect, and sometimes with an effect that would cause a change to something other than their allocation. Why are planners so stuck on being able to forecast things? Clients WANT advice about their choices to improve their lifestyle because of *Green Swans*, or prudent tweaks they should make in the face of possible Black Swans.

Return managers measure something that is often meaningless to wealth. They may or may not be successful at producing superior risk adjusted returns. But, it may be irrelevant in terms of actual wealth a person has, or can spend.

The abuses of the "odds of success" crowd cost many investors dearly. They focus only on finding Black Swans (not green ones, where there is more wealth and choices.) But it is time to stop playing these ridiculous games by pretending that 85% or 90% confidence is "better" than 83% or 75%. There are so many SMALL, tiny, insignificant savings and spending policy decisions that are far more manageable than the vast continuous uncertainty of the markets, and these decision levers are what real wealth managers can utilize to provide realistic and meaningful advice. That DOES NOT mean the advice will never change.

The future of financial advising is dependent on advisors recognizing this. Do you?

## Part Five - Conclusion: Superior Results with True Wealth Management

*"Most people would rather be certain they're miserable than risk being happy."*

*Robert Anthony*

In part one of this paper, we showed some simple examples of the effects of the difference between time weighted returns (return managers) versus dollar weighted (wealth manager) returns. Part two went through a real life client example and demonstrated how some of the "best" generally accepted and even clairvoyantly "successful" approaches of asset allocation ended up costing a widow investor millions of dollars of wealth. Part three examined *how unlikely* it is that markets would behave in a manner that would have avoided over and under funding, even though the initial odds were very high. Part four provided the detailed back up data for the returns and allocation shifts for our sample widow in part two. It also demonstrated how sensitive her wealth plan was to just **one year** of timing for a cash flow, inflation adjustment or just one year of inferior investment results.

In this last part of this paper, we will demonstrate that the superior dollar result of *real wealth management* is NOT due to mean reversion, lucky market timing, or exposing an investor to excessive investment risk (all assumptions of return managers, not wealth managers). To demonstrate this, we will apply the same rules we used for our 20 year old widow example - adjusting only the asset allocation but unrealistically not client goals - to another investor who is also 20 years old but is saving for a retirement that is 45 years away (referred to as "saver"). To keep a level playing field, both will start with the same 82% initial confidence level for their wealth management plan with a portfolio allocation that begins with 80% equity exposure in 1926.

The first step in this process is to examine the allocation shifts of a wealth management plan for our 20 year old saver to observe whether, like the widow, he experiences superior *wealth* results relative to other clairvoyantly selected "superior" investment strategies. His situation back in 1926 is that he is 20 years old and starts with \$2,000 in annual savings (keep in mind this is over \$21,000 in today's dollars) adjusted each year for 3% inflation until retirement at age 65, with a \$103,000 inflation-adjusted retirement income to age 100. This case is very similar to the "saver" we introduced in part three when we examined risk capacity relative to our widow and how unlikely it was the market would behave in a manner that would cause an allocation change for him in the near term, yet it was very likely for the widow. We slightly lowered the income goal for our saver in this case though to match both the initial confidence level and allocation at inception in 1926 to the widow's so we could contrast the difference in allocation shifts over time on a completely level playing field.

As would be expected for a plan with such high risk capacity, a 100% stock allocation in the "stocks for the long run portfolio" would actually almost double the results of the wealth management plan. But, keep in mind, in the wealth management plan the rules we apply are to avoid needless risk exposure to the equity markets and over the life of our saver we average only 53% equity exposure versus a lifetime of being 100% exposed to equities.

Also, as might be expected for a plan with very high risk capacity, using a fixed allocation over the entire life of the plan with a 45 year accumulation period is too conservative and produces an inferior geometric mean result, albeit with very low investment risk. Despite the wealth

management plan producing only 0.46% higher compound return with 5.5% higher risk, the wealth result compounds over time to be more than **21 TIMES** the wealth result of constant-weighted allocation that is unchanged over the entire plan horizon.

Also like the widow's example, the *target date/lifecycle* approach is once again about the worst choice that could be made for the saver. Starting with 80% equities and reducing the equity exposure by 1% a year at each birthday (as is the common rule of thumb for this approach) not only exposed our saver to fairly high risk and a low return, but **had him broke** at age 90 versus having \$26.7 MILLION at the end of the wealth management plan. The *theory of target date/lifecycle* approaches is to use the calendar as a proxy to consider risk capacity of withdrawals, but since it ignores the funded status, the shifts in allocation will frequently go the wrong direction from what makes sense based on the market's uncertain behavior and thus is the worst dollar result for both our widow and the saver.

Unlike our widow, for our saver with extraordinarily high risk capacity, none of these results are significantly different than what would have been predicted by return managers. However, many return managers argue that their value lies in superior selection and their ability to outperform and/or reduce investment risk. In our saver's case, his high risk capacity during much of his plan exposes a significant difference from our widow in the excess returns that need to be produced to come close to competing with a real wealth management plan. If we take the average equity exposure of the real wealth management plan of 53% and assume that the superior selection skills outperform the allocation policy by 0.75% each and every year (completely ignoring the risk of ever underperforming at the wrong time for the investor) we can observe in *Table 8* that the higher returns and lower risk added no value, and once again **cost the investor OVER \$4 million of wealth.**

*Table 8 - Wealth Management Choices for our 20 year old Saver*

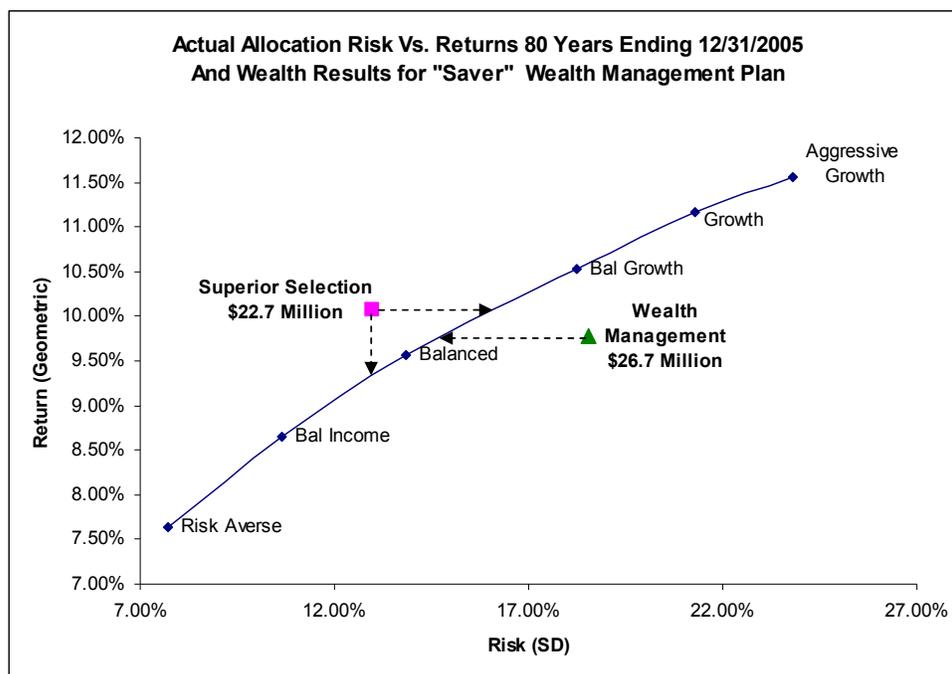
	Wealth Management	Superior Selection
Compound Return	9.78%	10.07%
Risk	18.54%	12.98%
Growth of \$100	\$174,519	\$216,166
Wealth at age 100	\$26,743,678	\$22,731,344

So, despite the high risk capacity and long term accumulation of our saver's wealth management plan, we again observe how misleading "successful" management of returns (and risk) is from the perspective of wealth. It is easy for return managers to sell this because investors are not aware of it, and make the erroneous assumption that there is some benefit to producing higher returns with lower risks. **BUT, is having \$4 million LESS WEALTH a benefit with the SAME spending?**

Think about how much "conventional wisdom" has suckered financial advisors into buying this *lack of any real value proposition* promoted by brokerage firms, money managers and mutual fund complexes into standard "best practices."

How many times have you seen a risk versus return chart like the one below in *Chart 5*?

Chart 5 - Historical Risk versus Return



The "Superior Selection" pink square on the risk/return chart shows a "great" benefit for the return managers that promote "risk adjusted returns" instead of wealth management. Sometimes return managers would sell such a portfolio based on how much it is above the efficient frontier, often drawing a line from the pink square straight down to the efficient frontier and showing that "excess return" as being their "value."

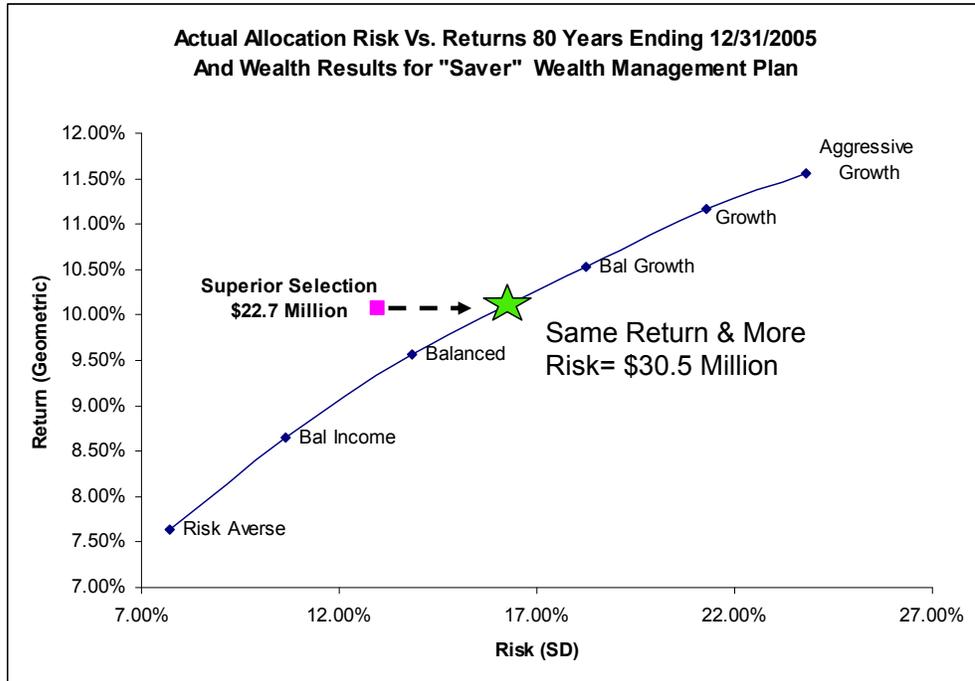
Even more ironic to me is how many advisors buy the story from the product vendors that are swindling them into a sales pitch that goes something like, "We are not seeking *excess returns*, we are about **risk control** and we seek investment results that only match market results with less investment risk." Of course, to sell this story they use a horizontal line that goes directly right from the pink square to the efficient frontier, supposedly demonstrating that they comply with their sales pitch of only equaling efficient market results with "less risk." How can investors (or worse, sophisticated financial advisors) be suckered into buying this? It is almost like a bad magician's sleight of hand in misdirecting the attention of the observer by choosing to guide their gaze based only on whether they focus vertically (the out performance pitch) or horizontally (the risk control pitch.) They are the same story! They are just packaged differently!

The one thing that is not normally shown on such risk/return charts is what the WEALTH effect is to the client. In this case however we expose the fraud of the return manager sales spin by showing the ending wealth result for a specific client and the \$4 million price to our saver's wealth derived from the return manager's approach of producing higher returns with lower risk. (The returns are all geometric/compound returns and the risk is standard deviation of annual returns.)

On a complete efficient frontier, there are more than just the model portfolio dots, there are an infinite number of portfolios that make up that efficient frontier line (the portfolio model "dots" are the actual results of FWC Model allocations used throughout this paper as described

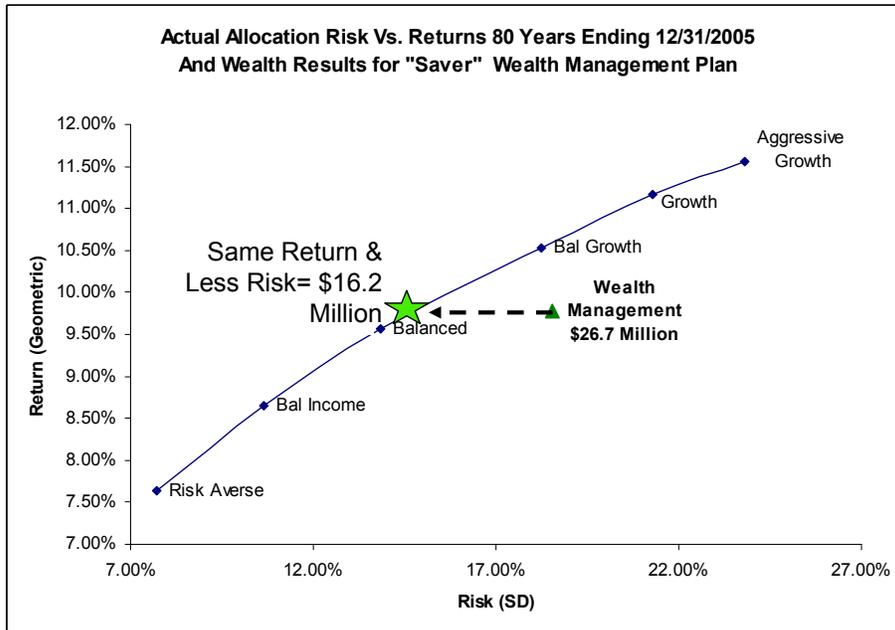
in footnote 3.) IF we were to choose merely the efficient portfolio that matched return for the superior selection portfolio (where the horizontal right arrow hits the efficient frontier) we would discover that such an efficient but "inferior" portfolio that had more risk and the same return would have produced \$30.2 million dollars, or \$7.5 million MORE WEALTH than the less risk and same return "superior selection" portfolio! (See *Chart 6, below*)

*Chart 6 - Higher Risk and Same Return Produce Higher Wealth*



Likewise, demonstrating the value of true wealth management, if I chose the portfolio on the efficient frontier that matched the return of the wealth management plan but was obviously more efficient (where the arrow goes left from our green wealth management plan triangle in *Chart 5*) I would discover the WEALTH result to be only \$16.2 million, a full \$10.5 MILLION DOLLARS OF WEALTH less than that "inefficient" real wealth management portfolio with more risk, and the same return (see *Chart 7*.)

Chart 7 - Same Return and Lower Risk Produce Less Wealth



It is personally very frustrating to me to see how such charts are used every day in the investment product selling industry to demonstrate fictitious value and also used to justify vastly uncertain choices in product selection (often with certain high expenses.) When one considers that the way such sales presentations are normally assembled is based on uncertain future results based on track record of what happened, instead of **WHAT WOULD HAVE HAPPENED** as in this analysis, it makes me want to scream!

The bottom line of this contrast though is the reality of what we showed in the widow's case, our saver's case, and where we started this entire series; it is the premise of the fundamental difference between managing returns, and managing wealth.

Personally, I am confused as to why people don't get this. To me it does not seem complicated to understand the simple realities of the difference in these two approaches. I know it is conceptually easier to ignore the reality of the numerous year by year variable results and data points to an oversimplified "bottom line" risk and return number. But, when we know that doing so may be meaningless for *what one is trying to achieve*, you would think that there would be a large enough universe of advisors out there who are sophisticated enough to expose the fallacy so that the game would ultimately come to an end. Yet, currently it thrives and even grows despite the fiction on which it is based.

Were these two superior wealth results of the widow and saver due to "mean reversion" or exceptionally lucky timing? Or, is this merely the nature of continuously managing the future uncertainty based on a unique set of goals (liability stream) as competently managed pension trusts do?

Table 9 - Details of "Saver's" Plan and Allocation Shifts

Saver's Age	Beginning Value	Savings (Spending Need)	Return in \$	Return in %	Year End Value	Allocation	Confidence Level	Confidence on New Allocation	Equity Exposure
21	\$ 2,000	\$ 2,000	\$ 150	7.5%	\$ 4,150	Bal Growth	77		80%
22	\$ 4,150	\$ 2,060	\$ 1,121	27.0%	\$ 7,331	Bal Growth	79		80%
23	\$ 7,331	\$ 2,122	\$ 2,503	34.1%	\$ 11,956	Bal Growth	80		80%
24	\$ 11,956	\$ 2,185	\$ (1,948)	-16.3%	\$ 12,194	Bal Growth	81		80%
25	\$ 12,194	\$ 2,251	\$ (2,679)	-22.0%	\$ 11,766	Bal Growth	77		80%
26	\$ 11,766	\$ 2,319	\$ (4,314)	-36.7%	\$ 9,770	Bal Growth	75		80%
27	\$ 9,770	\$ 2,388	\$ (415)	-4.2%	\$ 11,743	Bal Growth	69	80	80%
28	\$ 11,743	\$ 2,460	\$ 10,515	89.5%	\$ 24,717	Aggressive	78		100%
29	\$ 24,717	\$ 2,534	\$ 2,181	8.8%	\$ 29,432	Aggressive	84		100%
30	\$ 29,432	\$ 2,610	\$ 13,150	44.7%	\$ 45,191	Aggressive	83		100%
31	\$ 45,191	\$ 2,688	\$ 20,911	46.3%	\$ 68,789	Aggressive	85		100%
32	\$ 68,789	\$ 2,768	\$ (30,418)	-44.2%	\$ 41,140	Aggressive	90		100%
33	\$ 41,140	\$ 2,852	\$ 13,079	31.8%	\$ 57,071	Aggressive	83		100%
34	\$ 57,071	\$ 2,937	\$ (62)	-0.1%	\$ 59,946	Aggressive	82		100%
35	\$ 59,946	\$ 3,025	\$ (4,755)	-7.9%	\$ 58,216	Aggressive	82		100%
36	\$ 58,216	\$ 3,116	\$ (6,145)	-10.6%	\$ 55,187	Aggressive	79		100%
37	\$ 55,187	\$ 3,209	\$ 16,560	30.0%	\$ 74,957	Aggressive	74		100%
38	\$ 74,957	\$ 3,306	\$ 38,145	50.9%	\$ 116,407	Aggressive	77		100%
39	\$ 116,407	\$ 3,405	\$ 38,811	33.3%	\$ 158,623	Aggressive	83		100%
40	\$ 158,623	\$ 3,507	\$ 81,383	51.3%	\$ 243,513	Aggressive	86		100%
41	\$ 243,513	\$ 3,612	\$ (12,593)	-5.2%	\$ 234,532	Balanced	91	81	60%
42	\$ 234,532	\$ 3,721	\$ 6,610	2.8%	\$ 244,863	Balanced	77		60%
43	\$ 244,863	\$ 3,832	\$ 6,087	2.5%	\$ 254,782	Balanced	75		60%
44	\$ 254,782	\$ 3,947	\$ 40,034	15.7%	\$ 298,764	Bal Growth	70	80	80%
45	\$ 298,764	\$ 4,066	\$ 81,500	27.3%	\$ 384,329	Bal Growth	82		80%
46	\$ 384,329	\$ 4,188	\$ 58,629	15.3%	\$ 447,146	Bal Growth	84		80%
47	\$ 447,146	\$ 4,313	\$ 50,017	11.2%	\$ 501,476	Bal Growth	88		80%
48	\$ 501,476	\$ 4,443	\$ (7,761)	-1.5%	\$ 498,158	Bal Growth	87		80%
49	\$ 498,158	\$ 4,576	\$ 222,123	44.6%	\$ 724,857	Bal Growth	85		80%
50	\$ 724,857	\$ 4,713	\$ 89,073	12.3%	\$ 818,643	Bal Income	91	85	45%
51	\$ 818,643	\$ 4,855	\$ 20,643	2.5%	\$ 844,141	Bal Income	86		45%
52	\$ 844,141	\$ 5,000	\$ (11,346)	-1.3%	\$ 837,796	Bal Income	86		45%
53	\$ 837,796	\$ 5,150	\$ 185,780	22.2%	\$ 1,028,726	Bal Income	80		45%
54	\$ 1,028,726	\$ 5,305	\$ 61,709	6.0%	\$ 1,095,740	Bal Income	88		45%
55	\$ 1,095,740	\$ 5,464	\$ 62,001	5.7%	\$ 1,163,205	Bal Income	88		45%
56	\$ 1,163,205	\$ 5,628	\$ 161,810	13.9%	\$ 1,330,642	Bal Income	85		45%
57	\$ 1,330,642	\$ 5,797	\$ (19,763)	-1.5%	\$ 1,316,676	Bal Income	89		45%
58	\$ 1,316,676	\$ 5,970	\$ 149,461	11.4%	\$ 1,472,107	Bal Income	86		45%
59	\$ 1,472,107	\$ 6,150	\$ 157,098	10.7%	\$ 1,635,355	Bal Income	87		45%
60	\$ 1,635,355	\$ 6,334	\$ 175,047	10.7%	\$ 1,816,736	Bal Income	90		45%
61	\$ 1,816,736	\$ 6,524	\$ (27,046)	-1.5%	\$ 1,796,214	Bal Income	89		45%
62	\$ 1,796,214	\$ 6,720	\$ 367,197	20.4%	\$ 2,170,131	Bal Income	85		45%
63	\$ 2,170,131	\$ 6,921	\$ 196,419	9.1%	\$ 2,373,471	Risk Averse	92	88	30%
64	\$ 2,373,471	\$ 7,129	\$ (94,696)	-4.0%	\$ 2,285,905	Risk Averse	89		30%
65	\$ 2,285,905	\$ (103,000)	\$ 224,607	9.8%	\$ 2,407,511	Risk Averse	80		30%
66	\$ 2,407,511	\$ (106,090)	\$ 245,170	10.2%	\$ 2,546,591	Risk Averse	82		30%
67	\$ 2,546,591	\$ (109,273)	\$ 196,555	7.7%	\$ 2,633,874	Risk Averse	90		30%
68	\$ 2,633,874	\$ (112,551)	\$ (67,586)	-2.6%	\$ 2,453,737	Risk Averse	89		30%
69	\$ 2,453,737	\$ (115,927)	\$ (75,427)	-3.1%	\$ 2,262,382	Risk Averse	78		30%
70	\$ 2,262,382	\$ (119,405)	\$ 526,887	23.3%	\$ 2,669,865	Bal Income	67	79	45%
71	\$ 2,669,865	\$ (122,987)	\$ 599,345	22.4%	\$ 3,146,222	Bal Income	90		45%
72	\$ 3,146,222	\$ (126,677)	\$ 77,291	2.5%	\$ 3,096,837	Risk Averse	97	96	30%
73	\$ 3,096,837	\$ (130,477)	\$ 200,311	6.5%	\$ 3,166,670	Risk Averse	94		30%
74	\$ 3,166,670	\$ (134,392)	\$ 365,062	11.5%	\$ 3,397,341	Risk Averse	96		30%
75	\$ 3,397,341	\$ (138,423)	\$ 473,608	13.9%	\$ 3,732,525	Risk Averse	98		30%
76	\$ 3,732,525	\$ (142,576)	\$ 281,800	7.5%	\$ 3,871,749	Risk Averse	98		30%
77	\$ 3,871,749	\$ (146,853)	\$ 990,961	25.6%	\$ 4,715,856	Risk Averse	99		30%
78	\$ 4,715,856	\$ (151,259)	\$ 650,466	13.8%	\$ 5,215,064	Risk Averse	100		30%
79	\$ 5,215,064	\$ (155,797)	\$ 520,584	10.0%	\$ 5,579,851	Risk Averse	100		30%
80	\$ 5,579,851	\$ (160,471)	\$ 1,220,252	21.9%	\$ 6,639,633	Risk Averse	100		30%
81	\$ 6,639,633	\$ (165,285)	\$ 934,798	14.1%	\$ 7,409,146	Risk Averse	100		30%
82	\$ 7,409,146	\$ (170,243)	\$ 178,215	2.4%	\$ 7,417,118	Risk Averse	100		30%
83	\$ 7,417,118	\$ (175,351)	\$ 737,653	9.9%	\$ 7,979,420	Risk Averse	100		30%
84	\$ 7,979,420	\$ (180,611)	\$ 1,286,728	16.1%	\$ 9,085,537	Risk Averse	100		30%
85	\$ 9,085,537	\$ (186,029)	\$ 347,863	3.8%	\$ 9,247,370	Risk Averse	100		30%
86	\$ 9,247,370	\$ (191,610)	\$ 1,887,398	20.4%	\$ 10,943,158	Risk Averse	100		30%
87	\$ 10,943,158	\$ (197,359)	\$ 933,862	8.5%	\$ 11,679,661	Risk Averse	100		30%
88	\$ 11,679,661	\$ (203,279)	\$ 1,299,870	11.1%	\$ 12,776,251	Risk Averse	100		30%
89	\$ 12,776,251	\$ (209,378)	\$ (271,359)	-2.1%	\$ 12,295,514	Risk Averse	100		30%
90	\$ 12,295,514	\$ (215,659)	\$ 2,652,315	21.6%	\$ 14,732,170	Risk Averse	100		30%
91	\$ 14,732,170	\$ (222,129)	\$ 1,201,930	8.2%	\$ 15,711,972	Risk Averse	100		30%
92	\$ 15,711,972	\$ (228,793)	\$ 2,278,768	14.5%	\$ 17,761,947	Risk Averse	100		30%
93	\$ 17,761,947	\$ (235,657)	\$ 2,059,546	11.6%	\$ 19,585,836	Risk Averse	100		30%
94	\$ 19,585,836	\$ (242,726)	\$ 1,291,336	6.6%	\$ 20,634,446	Risk Averse	100		30%
95	\$ 20,634,446	\$ (250,008)	\$ 1,230,226	6.0%	\$ 21,614,663	Risk Averse	100		30%
96	\$ 21,614,663	\$ (257,508)	\$ 381,153	1.8%	\$ 21,738,308	Risk Averse	100		30%
97	\$ 21,738,308	\$ (265,234)	\$ 746,928	3.4%	\$ 22,220,003	Risk Averse	100		30%
98	\$ 22,220,003	\$ (273,191)	\$ 2,530,414	11.4%	\$ 24,477,226	Risk Averse	100		30%
99	\$ 24,477,226	\$ (281,386)	\$ 1,841,177	7.5%	\$ 26,037,017	Risk Averse	100		30%
100	\$ 26,037,017	\$ (289,828)	\$ 996,489	3.83%	\$ 26,743,678	Risk Averse	100		30%

As one might expect with a wealth management plan for a young saver with high risk capacity, there are fewer allocation shifts relative to the widow's plan (7 versus 9). In fact, this high risk capacity plan of our saver (see Table 9) caused only ONE allocation shift in the first TWENTY years of the plan, despite a very wild Great Depression bear market and post Depression

rebound. THAT is risk capacity! Our widow had ALL NINE of her allocation shifts occurring in the first twenty years of her plan. Think about this. Despite them being the same age and starting with the same allocation, the widow had no allocation shifts for the last 60 years of what became an excessively over funded plan, while during this same period the saver had 6 of his 7 allocation shifts occurring. The superior *wealth management* results for both our widow and saver were created by shifts in asset allocation that overlapped ONLY ONCE in the last 80 years.

Both plans ended up being excessively over funded by age 72, so the last 29 years had them both in the most conservative, risk averse allocation. However, in the first 51 years of these plans, they had the same allocation in only 27% (14 of 51) of the years, as seen in *Table 10*.

*Table 10 - Allocations of Widow and Saver for first 51 Years*

Year	Age	Widow		Saver	
		Allocation	Equity %	Allocation	Equity %
1	21	Bal Growth	80%	Bal Growth	80%
2	22	Bal Growth	80%	Bal Growth	80%
3	23	Bal Income	45%	Bal Growth	80%
4	24	Risk Averse	30%	Bal Growth	80%
5	25	Bal Income	45%	Bal Growth	80%
6	26	Bal Growth	80%	Bal Growth	80%
7	27	Aggressive	100%	Bal Growth	80%
8	28	Aggressive	100%	Aggressive	100%
9	29	Aggressive	100%	Aggressive	100%
10	30	Aggressive	100%	Aggressive	100%
11	31	Aggressive	100%	Aggressive	100%
12	32	Risk Averse	30%	Aggressive	100%
13	33	Risk Averse	30%	Aggressive	100%
14	34	Risk Averse	30%	Aggressive	100%
15	35	Risk Averse	30%	Aggressive	100%
16	36	Bal Income	45%	Aggressive	100%
17	37	Balanced	60%	Aggressive	100%
18	38	Balanced	60%	Aggressive	100%
19	39	Risk Averse	30%	Aggressive	100%
20	40	Risk Averse	30%	Aggressive	100%
21	41	Risk Averse	30%	Balanced	60%
22	42	Risk Averse	30%	Balanced	60%
23	43	Risk Averse	30%	Balanced	60%
24	44	Risk Averse	30%	Bal Growth	80%
25	45	Risk Averse	30%	Bal Growth	80%
26	46	Risk Averse	30%	Bal Growth	80%
27	47	Risk Averse	30%	Bal Growth	80%
28	48	Risk Averse	30%	Bal Growth	80%
29	49	Risk Averse	30%	Bal Growth	80%
30	50	Risk Averse	30%	Bal Income	45%
31	51	Risk Averse	30%	Bal Income	45%
32	52	Risk Averse	30%	Bal Income	45%
33	53	Risk Averse	30%	Bal Income	45%
34	54	Risk Averse	30%	Bal Income	45%
35	55	Risk Averse	30%	Bal Income	45%
36	56	Risk Averse	30%	Bal Income	45%
37	57	Risk Averse	30%	Bal Income	45%
38	58	Risk Averse	30%	Bal Income	45%
39	59	Risk Averse	30%	Bal Income	45%
40	60	Risk Averse	30%	Bal Income	45%
41	61	Risk Averse	30%	Bal Income	45%
42	62	Risk Averse	30%	Bal Income	45%
43	63	Risk Averse	30%	Risk Averse	30%
44	64	Risk Averse	30%	Risk Averse	30%
45	65	Risk Averse	30%	Risk Averse	30%
46	66	Risk Averse	30%	Risk Averse	30%
47	67	Risk Averse	30%	Risk Averse	30%
48	68	Risk Averse	30%	Risk Averse	30%
49	69	Risk Averse	30%	Risk Averse	30%
50	70	Risk Averse	30%	Bal Income	45%
51	71	Risk Averse	30%	Bal Income	45%

We can also observe some of the massive differences in the allocations for the widow and saver with allocations in some periods being at the opposite extremes of 30% and 100% equities (at ages 32-35 and 39-40), all based merely on management of the liabilities and funded status like competent pension trusts do.

After releasing part two of this paper as an educational advisor email, I heard from an advisor, who is no longer a client of ours, responding to the data illustrating the superior wealth result for the widow by saying: "*Hidden in your philosophy and what makes the numbers work is the principle of reversion to mean in the markets.*"

Of course, when he said this (what is now an obviously erroneous statement in the face of the evidence in *Table 10*) he was not yet privy to this data which exposed the fact that *only one* of the allocation shifts of two superior WEALTH strategies occurred in the same year and that in 73% of the years the allocations were different before both the plans were excessively over funded.

This is the evidence that one needs to ascertain whether the advisor is a return manager instead of a wealth manager. He was so convinced that returns and risk (the dogma of what he has been trained to sell) are more important than wealth, that he came up with a return manager assumption to defend a factual result he either did not like, or contradicted his return manager training. Many advisors do this daily. After all, it is conventional "wisdom" and many "advanced" training programs show the value generated by creating über efficient (and often expensive) portfolios. It is used to justify expenses, both those of the product vendors using advisors as their source of "distribution" and the advisor's fees for advice through inheritance, since it is supposedly the source of the advisor's primary value. It is still no different though than measuring temperature with a ruler. The investor that ends up with less wealth (albeit with "better" risk adjusted returns) is the victim of this game.

Please remember that NONE of these results, despite being based on actual history for the last eighty years, would have actually occurred because of the individual choices a real wealth manager (or investor who is not brain dead) would have made along the way. Decisions would have been made throughout the life of the plan such as reducing or increasing savings, increasing or decreasing estate targeted value or changes in amount or timing of planned spending, OR (*not just*) adjusting investment risk. This entire paper merely exposes the difference in only the allocation choice (isolating the single choice to be investment risk) between managing meaningless risk and return numbers versus the discipline of one who is truly focused on managing wealth. **The results and benefits of considering more than just allocation policy can help one make the most of his or her life.**

We normally close our thought pieces by saying that this is the future of financial advising. The reality of this true wealth management discipline we have been attempting to teach to advisors for almost ten years is that it is not all that new as it is conceptually similar to the same old process used by sophisticated pension trustees for decades.

But, most of the industry cannot let go of their "magic" of risk versus return charts and "superior" risk adjusted returns, that may end up actually destroying the investor's wealth, even if the track record plays out going forward. The product vendors sell stories that people (both investors and advisors) want to hear and believe in, regardless of whether or not there is any wealth benefit to it. They profit from it handsomely by preying on such victims (many of those victims being the advisors themselves who recite the sales spin without even realizing they are misleading their clients) enough to maintain a media message that positions their fiction as if it were fact.

We are content with truth. This, in all reality, is *probably* not the future of financial advising, at least the foreseeable future, but it is what an honest, ethical, *wealth manager* delivers just as a meteorologist uses a thermometer to measure the temperature instead of a ruler.