the Pension Dynamics Guide *to* 401(*k*) Plan Design & Operation

By Stephen J. Butler

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About the Author

Stephen J. Butler is the founder and President of Pension Dynamics Corporation in Pleasant Hill, California. He is the author of two books on 401(k) plans: The Decision-maker's Guide to 401(k) Plans" and a sequel, "401(k) Today." He is the originator of the "Butler Index" which is an index of total costs of 401(k) plans—an index featured in articles in the New York Times and the Wall Street Journal. An expanded version of the index prompted an eight-page cover article in MONEY magazine in 1998, entitled, "Beware, Retirement Plan Rip-off." Mr. Butler also testified at cost-related hearings conducted by the Department of Labor in 2000 and was on national television with Tom Brokaw and CBS news at the time. More recently, in March of 2007, he testified on the subject of hidden costs before the United States House of Representatives Committee on Education and Labor.

Mr. Butler founded Pension Dynamics Corporation in 1978. The company's first 401(k) plan was established in 1980 and since that time, over 1,000 plans have been operated on behalf of participants who have accumulated well over $1 billion in retirement assets.

Independent of any single financial institution, Mr. Butler's company has been free to "roam" the entire mutual fund industry in search of investments that offered the best potential for achieving the goals of plan participants. Roughly forty percent of all plan assets have found their way to the famously low-cost Vanguard family of funds, but other popular fund families have included T. Rowe Price, Dodge and Cox, the American Funds and then a broad selection of over one hundred no-load fund families.

The net effect of this experience and independence has led to an astonishing revelation based on recent research. A broad selection of investment choices for participants, selected solely based upon high-performance and low-cost considerations will outperform the typical plan sponsored by a financial institution by as much as several percentage points per year. Several percentage points per year, thanks to the magic of compound interest, can easily double the amount of money available at retirement.

The author's company, Pension Dynamics Corporation, has proven to be more than just another record-keeper operating in the backwaters of the retirement plan administration community. It is has served as a "skunk works" over the years to time-test 401(k) plan design features, investment selection practices, employee education exercises and seamless electronic record keeping. Every idea illustrated in theory is backed up in practice as a "noble experiment" at Pension Dynamics.

Understanding 401(k) Costs

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When it comes to deciding what type of 401(k) plan to offer, the Plan Sponsor's greatest contribution to success in behalf of participants lies in the area of keeping investment costs as low as possible while offering investments with the highest potential for generating superior returns in each investment category. Sounds simple enough. After all, this is what every 401(k) sales team or advisor assures you they are offering.

Let's start with a glimpse of the industry and how much money 401(k) plans generate. Understanding how the "other side" works should sharpen the intellect and set the stage for a knowledgeable analysis of competing plan alternatives.

The 401(k) phenomenon has been a godsend to the financial services industry. Mutual fund profits on any account over $50,000 are roughly 94 percent on average. It costs about 6/100ths of a percent to actually perform the accounting and money management work required of any account larger than this amount. Meanwhile, the average mutual fund charges about one full percentage point—a 94/100ths percent premium.

All 401(k) mutual fund investments have over $50,000 because the plan itself is considered to be the investor. The fact that the money may be divided among hundreds or thousands of employees is performed by electronic record keeping at a cost of a few dollars per month per employee. The mutual fund industry, on all of its accounts combined, makes an annual 30 percent pre-tax profit in good times and bad—more money than Microsoft ever did—and your 401(k) plan is a major contributing factor to this level of success.

Here's how the system works:

There are four major cost components of a 401(k) plan. Two are paid by plan sponsors and two are paid by plan participants. There are two types of costs paid by each source of money. First, "Hard dollar" costs are those annual costs paid by plan sponsors and participants that actually can be measured in dollars. "Soft dollar" costs, by comparison, may also be paid by both parties but they are "soft" in the sense that they may or may not happen in any given year. A soft-dollar cost, when applicable, is generally the result of incompetence on the part of advisors or plan vendors.

	Plan Participant	**Plan Sponsor**
Hard Dollar Costs	Money Management	Administration
Soft Dollar Costs	Substandard Investment Performance	Plan Disqualification

Plan Sponsor Costs

Administration – "Hard dollars"

Plan sponsors typically pay for administration and compliance testing. Administration involves the participant recordkeeping or the tracking of each employee's investments They are making a mistake if they pawn these costs off as an expense to participants. What will often be described as a "free" 401(k) plan is nothing more than a plan that hides the cost to participants in the form of unnecessary and higher annual fees charged by the investments and used to pay for administration.

A reasonable record-keeping cost for a plan sponsor today is about $60 per year per participant and some asset-based charge to cover the cost of maintaining the plan on a typical electronic platform. The electronic platform is the tool that allows participants to access their account on a daily basis through the Internet or through an 800 number voice response unit. Sending hard copy statements to a participant's home each quarter would also be expected of today's typical 401(k) plan. The asset-based component of an administrative charge would typically be in the neighborhood of 10/100ths to 30/100ths of one percent per year. These percentages could reasonably be higher for smaller plans with less than $1,000,000 in assets. Ideally, all of these plan charges are best paid by plan sponsors as a tax-deductible business expense rather than as a charge against participant annual earnings.

Beyond the record keeping, there is the plan document, compliance testing, annual reporting and consulting with regard to on-going plan design changes. Creative plan design that adapts to changing laws and business conditions can add a great deal to the ongoing value of a 401(k). For example, many people are surprised to learn that the maximum annual per-participant contribution to a 401(k) plan can be as much as $52,000 plus another $5,500 for employees aged 50 and over. Most people think the maximum number is $23,000—the base $17,500 plus the $5,500 catch up.

The cost for these administrative services—including the introduction of more creative plan features (see above)—is typically in the range of $1,500 to $5,000 per year.

Financial advisory services—choosing the investments and handling the employee education. The fee for this service can range "all over the map." Anywhere from a (reasonable) 0.2 percent to an (unconscionable) 1.0 percent can be found. It is a factor that is subject to negotiation and annual adjustment. An assessment of the time spent by the advisor or team of educators is the best starting point for determining what is fair. There is a small but growing trend for these fees to be assessed on a per-participant basis rather than as a percent of assets.

Compliance Failures – "Soft Dollars"

Plan sponsors also pay penalties or legal fees when the plan is administered incorrectly. This happens often when the non-discrimination testing is miscalculated and the plan fails what would have been an audit. To reconstruct what should have happened can be extremely expensive. As a general rule, mutual fund and administration companies don't pay for the mistakes they cause—at least not without a legal battle and a parsing of the "hold harmless" language in most service contracts.

Extremely complex laws require testing to ensure that 401(k) plans do not favor highly compensated management and owners unless everyone else has reached adequate participation levels. This is why 401(k) plans have matching contributions and regular promotional meetings on company time. Mistakes in this testing can generate penalties, legal costs, and the costs of otherwise unplanned deposits to fix the problem. A plan administrator, for example, may inadvertently allow highly-compensated employees to contribute more money than would legally have been possible had the testing been done correctly. Within a year, the excess money can just be returned. After a year, it's too late to go back. Instead, the plan sponsor is forced to contribute enough for all non-highly compensated employees so that their percentage contribution then supports what the executives contributed. Depending on company demographics, this number can be huge. We recall one case where the cost was $400,000. Throughout the country, other oversights have been settled for as much as $26 million.

401(k) vendors often fail to take legal responsibility for problems they create. Many will have service contracts that outline the testing and compliance exercises they WILL provide, but they leave it up to the plan sponsor to recognize what they are NOT covering. In more egregious examples, a vendor's contract will have the following wording: "The design and ongoing operation of your plan needs to be reviewed by your tax and legal advisors." It is essentially saying that they will do the work, but not guarantee that it is done correctly.

Participant Costs

Expense ratios – "Hard dollars"

Participant costs begin with the hard dollar costs of annual expense ratios—money actually charged to the plan by mutual funds. These are the fees deducted from accounts on a daily basis throughout the year. In a typical plan, they will average between one and two percent per year. In a well-researched plan, they can be as low as one half percent per year. The difference can mean as much as fifty percent more money at retirement, but we will explore this point in detail later in the book.

These annual expense ratios slip under the radar all too often because no participant ever receives a bill or has to write a check. The money is automatically deducted and the participants simply see what is left—an amount that constitutes their annual net rate of return after any fees have been deducted—fees they never see expressed in total dollars for the year. In the world of insurance company 401(k) vendors, the participant cost is referred to as an "annuity wrap fee." This fee will be over and above the expense ratios of the underlying mutual funds.

Hard dollar costs to participants—both hidden and disclosed—have become the subject of court battles and a concern of Congress. Subsequent chapters will cover this critical subject and its importance to plan decision-makers.

Poor Performance – "Soft Dollars"

This second cost, which we will call a "soft-dollar" cost, is the cost of substandard investment results. In a vast majority of cases, a plan's investment choices have been established for the convenience of the financial institution selling the plan. The 401(k) is a marketing tool and a moneymaking machine. New money comes in every pay period, and there is a captive audience of participants. Investments were rarely chosen because they represented the best past performance that the fund industry has to offer. They were just the best that that particular financial institution had to offer. This difference, as we will see in the next chapter, can represent a huge loss to participants.

Soft-dollar Costs

Participant soft-dollar costs are generated by a combination of:

1. Substandard investment results caused by a faulty fund selection process
2. Incorrect or faulty plan design that incorrectly limits what employees can contribute
3. Inadequate financial education that fails to identify an "efficient frontier" for each individual employee. In other words, a failure to match the employees' goals with their respective risk tolerances.

Summary

All sophisticated investors know that the only controllable variable in the investment process are the costs of managing the money. When a vendor suggests that their plan's participant costs don't matter because the performance—after deducting for costs—is superior, they've just broken securities laws. Past performance is no guarantee of future results. It is illegal to imply that a plan's future performance will offset what are comparatively expensive hard dollar costs.

More common in the vendor community is the practice of illustrating a list of funds that have clearly outperformed the current plan's incumbent funds. Anyone, with the benefit of hindsight, can create a fund selection that has seemingly outperformed the existing selection. This is not a legitimate reason to change plans or subject participants to higher costs.

These are just a few examples of the industry practices that make informed decision-making more difficult than necessary. A thorough understanding of costs is the starting point for any judge of plan quality.

How to Choose a 401(k) Vendor

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Of the four costs mentioned in the previous chapter, by far the greatest is the opportunity cost of poor investment choices available to participants. Poor performance dwarfs all other costs because most 401(k) investment choices are assembled based on the convenience of the financial institution selling the plan. Whether it's Fidelity, Merrill Lynch, Charles Schwab, Mass Mutual or a host of other major players, the choice of fund offerings will be dictated by the needs of the vendor's bottom line --- not that of you or your employees. Most major players in the industry choose funds that are their own proprietary funds (with 94 percent profit margins) or funds with which they have negotiated "shelf space" fees and a variety of revenue-splitting agreements. The term "bundled" (which you will hear a lot) refers to plans operating in this format.

In spite of industry practice, common sense dictates that access to the entire universe of mutual funds is the best possible starting point for selecting investments. The term "open architecture" has been coined to describe this unlimited opportunity. "Open architecture" allows plan sponsors and their advisors to effectively comb the mutual fund industry in search of optimal fund candidates to represent each of the plan's investment categories.

Here is what we believe we have been creating for participants:

$10,000 per year for thirty years earning 10 percent per year accumulates to $1,645,000

$10,000 per year for thirty years earning 8 percent per year accumulates to $1,133,000

The difference is $512,000

What knowledge about 401(k) investment selection do you need to know to generate that extra 2 percent for a nest egg enhancement of about $500,000?

Our Research

After a two-year study of our own client base, we come away convinced that open architecture may enhance investment results by as much as 3 percent per year in bull markets (2003-2007) and as much as 1 percent per year in bear markets (2007-2008.) By the term "enhance" we are referring to higher returns when compared with those plans dominating the 401(k) industry that offer the "closed architecture" of a self-serving investment selection. This is a startling conclusion. It means that half of what most 401(k) participants could otherwise have accumulated as a nest egg by retirement will be eaten away by substandard investment choices.

To reach this conclusion, we created a spreadsheet that included all of our 401(k) clients across the top and all funds offered in all plans listed down the left side. Next, we created a simple weighted average return for all plans combined. To accomplish this, we multiplied the dollar amount in each fund by both the average annual percentage three-year return as well as by the five-year return. This provided us with annual dollar amounts for three and five year look-back periods. Adding up all the dollars and dividing by the total amount in all plans combined, we arrived at an average annual percentage rate of return for three years --- and a second percentage return based on a five-year look-back. The following simplified example is based on 3 and 5 year "lookbacks" as of June 2007. In these calculations, we excluded money market or stable value funds, because our object was to see how effectively people were investing within investment choices that involved risk.

Fund		Assets	% of Total	3 Year	Return 5 Year
Dodge & Cox International Stock	$	101,605	34%	26.30%	22.99%
Vanguard 500 Index	$	135,503	45%	25.91%	11.53%
Third Avenue Small Cap Value	$	35,235	11%	14.07%	14.62%
JP Morgan Select Mid Cap Value	$	29,554	10%	15.55%	16.34%
Total	$	301,897	100%		

Fund		3 Year Weighted Average		5 Year Weighted Average
Dodge & Cox International Stock	$	26,722	$	23,358
Vanguard 500 Index	$	35,108	$	15,623
Third Avenue Small Cap Value	$	4,957	$	5,151
JP Morgan Select Mid Cap Value	$	4,595	$	4,829
Total	$	71,387	$	48,962

Weighted Average Returns:

3 Year = $71,387 / $301,897 = 24% per year

5 Year = $48,962 / $301,897 = 16% per year

As of June 2007, based on three-year and five-year look-backs, the returns were 16.4 percent and 11.4 percent respectively. The reason for a smaller five-year number? As of June of 2007, the first of five years was the last year of the early 2000's market crash. After calculating the weighted average return for the entire client base, we also performed the same exercise for each individual client. As expected, the individual results grouped around those of the client base as a whole.

We repeated the same study a year later in 2008 after the market had lost roughly 20 percent. As of June 2008, the three-year average annual return was 10.9 percent and the five-year number was 13.5 percent These numbers outperformed most popular proprietary 401(k) packages by 1 percent for both three and five-year look-backs.

Creating an Industry Comparison

With the distinction of being in the 401(k) industry as an Open Architecture vendor, we have an opportunity in competitive situations to see what funds are currently offered in an existing 401(k) plan. We see what dollar amounts exist in which funds. Plan by plan, we can perform the same weighted average calculations with the value of using actual investments and dollar amounts that the plans hold. We're comparing with actual plan investments that our plans hold. Using real money and real funds is what gives power to the 1-3 percent comparative advantage that we have demonstrated.

All too often, competition between different vendors simply involves each competitor trotting out a selection of funds they might have chosen after the fact. Comparing these hypothetical funds against the existing funds in a plan is a questionable technique that guarantees that the competing vendor will appear to have better performance. Hindsight is always twenty-twenty. Also, traditional comparisons of investment performance rarely use weighted averages of returns that reflect where the money in the plans is actually invested. Our Open Architecture comparisons are always using real plans with real money.

Summary

The key to superior quality and better investment performance begins with open architecture and its unlimited access to all corners of the mutual fund industry. Once the decision-making environment s reached this plateau, the real work can begin.

“Fiduciary!” What the Term Means to You

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Fiduciary Defined

A 401(k) plan fiduciary is a person who is required to make all plan-related decisions in the sole interest of the plan’s beneficiaries. This means that the selection of investments and the cost of the plan charged to participants will have a primary objective of giving employees the best possible opportunity to benefit from their participation in the plan.

The officers of a company offering a 401(k) are the fiduciaries of the plan. Anyone else having discretion as to how the money will be invested is also deemed to be a fiduciary. Within the financial services industry, there is a great deal of ambiguity as to who is, and who is not, a fiduciary under the law. For example, the contractual service agreements offered by the mutual fund industry and signed by company owners specifically state that they, the mutual funds, are not fiduciaries.

A key ingredient of the fiduciary definition is that fiduciaries cannot benefit financially from any decisions of which they are a part. If the mutual fund is being paid to sell and operate the plan, it is obviously benefiting, so it has to eliminate any possibility of being construed as a fiduciary. If not, then every contribution into one of its funds would be a prohibited transaction under the law.

The application of confusing rules governing fiduciary behavior has became a slippery slope.

How slippery? How confusing? As of April 2007, fifteen major U.S. Fortune 500 companies have been sued in class action lawsuits by their employees for having failed to meet their fiduciary obligations. (Now the number is much greater.) The mistake of the plan sponsors was that they elected to use major 401(k) vendors who offered “free” administrative and human resource services while charging participants what is now deemed to be an “unreasonable” ongoing fee. The latter was a percentage of assets far in excess of what could otherwise have been negotiated. The co-defendants in some of these lawsuits are the nation’s largest 401(k) vendors.

Regulation 404(c) of the U.S. Department of Labor

Regulation 404(c) was an attempt, about ten years ago, to offer some advice and protection to plan sponsors. It is not a law, but it calls for plan provisions that most plans already had at the time. To satisfy 404(c), a plan must adopt the following:

1. Three investment choices to include a money market fund, a stock/bond balanced fund, and an all-stock fund
2. A program of employee investment education
3. A written investment policy statement

Beyond these basic requirements there are roughly 25 other seemingly lesser notification and operational requirements to meet the legal definition of a 404(c) plan. Extremely few plan sponsors who think they meet 404(c) requirements are actually in compliance given the multitude of housekeeping requirements. Fortunately, Regulation 404(c) is NOT A LAW. It is considered to be a guideline only. Following its provisions offers what is considered to be some protection in the event of a lawsuit from a group of employees. Virtually all of the defendants in the above-mentioned lawsuits thought they had 404(c) protection, but in a case of “form over function” the “form” lost. Their behavior, on a functional level, flat out violated the most fundamental obligation of a fiduciary.

Over the past thirty years of 401(k) operation, there has never been a single lawsuit filed in the United States court system by employees who have been offered a reasonable selection of name-brand mutual funds. There has never been a lawsuit from employees who lost money during the down markets of 2001-2003 and who might otherwise have claimed that they never received enough education. We can set aside “stock drop” cases like Enron, where stock and criminal activity were both factors and not investment selection or lack of investment education. In Enron's case, employees were further put at a disadvantage by the fact that a change in vendors caused a freeze in their accounts that lasted for almost half the year during which the company imploded. In that case, there was a perfect storm of events.

All of the lawsuits that have been pursued have been fee-related. Employees of First Union Bank received $25 million when the bank was shown to have overcharged their 401(k) accounts. The current class action lawsuits are entirely based upon excessive participant fees while plan sponsors received administration and human resource services at no cost to the company. The entire focus of 404(c) involves plan administrative and notification demands (some would say nuisance factors) that have never been issues in any lawsuits.

Investment Education without Triggering a Prohibited Transaction

The "Catch 22" of the fiduciary rules applicable to 401(k) plans centers around the dilemma of offering investment education. A mutual fund company selling its own mutual funds in the plan could immediately be faulted if its sales people recommended funds having higher annual expense ratios than others. They would be making a recommendation that was "not solely in the interest of participants." This means that the mutual fund vendor cannot be the organization providing the participant investment direction or education.

The latest directive from the U.S. Department of Labor has skirted this problem by allowing mutual fund companies to offer participant direction as long as the direction is supplied by an outside, (i.e. "computerized") service that is "revenue neutral" and blind to what the mutual fund company might be earning as a result of this investment education and directing of investments.

For employees to receive any meaningful financial education given these limitations, they must have reasonably sophisticated computer skills and be prompted to use them. Those needing help the most are generally less equipped to meet this requirement.

Auto-Enrollment and Fiduciary Obligations

An employee automatically enrolled is someone who will have an investment mix selected for him or her by the fiduciaries. While choosing a money market fund would avoid the possibility of any loss, the Labor Department has said that this is not an acceptable default investment because it does not protect against inflation. A fiduciary selection of a balanced fund consisting of stocks and bonds will not be deemed to have violated fiduciary obligations. Anything other than a balanced fund would be a potential problem.

While this new regulation is certainly well meaning, it couldn't have been decreed at a worse time. For the first time in modern history, both the stock and bond markets have plunged simultaneously in 2008. Reluctant employees anxious about contributing money in the first place have now been subject to 20 percent losses. Again, fiduciaries that elected to abide by the law and offer balanced funds for the default investment will never be faulted (at least legally) for that decision. They are still subject, however, to possible suits as a result of default investments that may later be deemed to have charged participants too much in annual expense ratios.

Summary and speaking to "deemed fiduciaries" (you know who you are…)

The discussion of fiduciary liability plays a major role in the marketing of 401(k) plans. In many cases, vendors and advisors incorporate the subject as part of a marketing fear tactic—a reason for why they should be paid to monitor the plan. There is nothing wrong with seeking professional help. The only problem comes when that service carries no insured guarantee of co-responsibility and when the cost (billed in most cases to participants in the form of higher plan fees) is excessive and unwarranted.

Ironically, those major lawsuits against fiduciaries have been fee-related and typically involved cases sold by institutions representing themselves as offering “fiduciary protection” to plan sponsors. In the end, you can have an army of “co-fiduciaries,” but if you’re charging participants too much money and costing them what would otherwise have been ten to fifty percent more money by retirement, you and your “army” will go down to defeat.

How to Assemble a Winning Fund Selection 4

The Application of Open Architecture

We have established that Open Architecture generates superior investment results, and that you and your fellow employees deserve nothing less. There is a variety of good mutual fund screening tools, but Morningstar has the best name recognition and employees will be familiar with the star ratings and report formats.

To use growth funds as an example, our adaptation of the Morningstar screening process lines up all growth funds in order of their declining three-year average annual results. Once ranked on a three-year basis, however, the screen also identifies each fund's results for one-year and five-year periods. The screen also lists star ratings and annual expense ratios for each fund.

The star rating is important because it reflects a "risk-adjusted" performance comparison. Two funds having the same average arithmetical performance can have different star ratings. The higher star rating will be applied to the fund with a straight line of results. The lower star rating will apply to the fund whose results were irregular but for which the "music stopped" at just the right time.

Toward the top of a screened list, usually within the top ten funds, we can find a fund with superior risk-adjusted performance and low expense ratios. We are confident that we have selected a fund that had clearly outperformed the vast majority of its peers for the past several years. A five-star rating means that the fund had outperformed 90 percent of its peers on a risk-adjusted basis while four stars beats 80 percent, etc. We repeated this process creating similar screens for all other fund categories offered in the plan.

Validity of the "Hot Hands" theory

Underlying the above as a viable fund selection process is to believe the research regarding "hot hands" in the mutual fund industry. A study at the Harvard Business School was published in the Journal of Finance in July of 1993. It illustrated that funds having outperformed their competitors had a better than fifty percent chance of continuing to be winners for the next eight calendar quarters. The study went one step further and showed that losers have a high probability of continuing to be losers. Since that time, a number of similar studies have reached the same conclusion to the extent that the term "persistence" now describes the condition. Mark Hulbert, having successfully ranked money management firms for over twenty-five years, also points out that long-term success supports the theory that yesterday's winner will continue to be a future winner—at least when compared to its competitors of the same investment type and style.

A typical plan includes funds that represent the following fund types: money market, short-term bond funds, income funds, balanced funds, growth and income funds, large value, large growth, 500 index, mid-cap value, mid-cap growth, small-cap value, small-cap growth, foreign funds, world funds, emerging markets, energy, health, technology, and other funds at the client's discretion. In the core fund areas, we typically offer a combination of both active and passively-managed (index) candidates. We also offer some version of target date or lifestyle fund.

So how does our process compare with normal industry practice? In many cases, the funds in a major vendor's plan have rarely been reviewed, much less improved. In large financial institutions, inertia stands in the way of considering the addition or changing of fund offerings—either system-wide or for a single client.

Moreover, the key criterion for choosing a fund in the first place was that it typically had to be a proprietary fund. If you're one of the larger fund companies in the world, you got that way by demanding that virtually all funds in your 401(k) product were your own company's offerings. For a veneer of objectivity, you might have offered a few non-proprietary investments but only with the understanding that the "core" funds (the ones expected to attract the majority of the assets) were required to be your own funds.

When we had access to any 40(k) fund line-up and the dollar amounts in each fund, we conducted our same weighted average calculations on existing plans operated by major financial institutions. The most valuable component in this comparison is that these were all existing plans—with real funds and real participant money. In no case were we comparing proposed fund choices—a faulty process that dominates the Request for Proposal (RFP) process and introduces the benefit of hindsight. Anyone looking back after the race has been run can find winners that will beat any selection of existing funds.

For an open architecture adherent, improving on a plan operated as a sales engine for a fund company's own proprietary funds is like shooting fish in a barrel. The open architecture advantage of as much as 3 percent per year is not some fluke. In some plan comparisons it was as much as an 8 percent annual difference. These weighted-average comparisons effectively make the case that the vast majority of 401(k) participants are forced into plans that may have been costing them anywhere from 1 percent to 3 percent per year in opportunity costs. Earlier, we illustrated the $500,000 difference in outcome with just a 2 percent performance difference on a thirty-year $10,000 contribution. The 2 percent difference may have been too charitable. With the magic of compound interest applied to a slightly larger difference of 3 percent, the opportunity cost (lost opportunity) for participants could be as much as half of what could otherwise have been their accumulated retirement account balance. Uninformed decision-making that stands in the way of a hopefully larger annual return is costing the average 401(k) participant almost half their future nest-egg.

How to Create what Your Participants Need

It is possible to negotiate with bundled providers and create open architecture environments where one would least expect to find them. Fidelity, for example, will operate a plan without a single Fidelity fund as long as they can charge 35 basis points (35/100ths of 1 percent). That is a viable option and an excellent value, but how many plan sponsors would have known that such customization and investment quality was possible? Fidelity, with its own funds in a plan makes far more than 35 basis points. To their credit, it's a good marketing strategy, because as a plan provider at least, they have a better shot at adding their own funds in the future. Meanwhile, Charles Schwab, Wachovia/Wells Fargo Bank and several insurance companies now offer versions of Open Architecture. But, what sometimes appears to be a good opportunity for plan participants is nonetheless contaminated by fund choices charging fees to participants so that they can appear to be a "free" plan to the plan sponsor.

Other Contributing Factors to Open Architecture Success

Apart from the selection process outlined above, our success has stemmed from an effort to reduce participant costs as much as possible. 42 percent of all money in the plans we operate is invested with the Vanguard family of funds. Dodge and Cox captured about 15 percent, T. Rowe Price about 10 percent, American funds about 10 percent—and the rest is spread out over 150 other funds.

Will Open Architecture Become an Industry Standard?

With the gathering storm of cost disclosure soon to rile the industry, there will be a growing focus on investment decisions that serve only the interests of plan participants. Common sense and further study will contribute to the growing realization that open architecture yields superior results. It will become increasingly difficult to rationalize that a fund selection confined exclusively to Fidelity or American funds, for example, were chosen with the best interests of participants in mind.

Why Should this Matter to a Plan Fiduciary?

A retirement plan fiduciary is someone personally liable for making all decisions in the sole interests of plan participants. Anyone who plays a role in selecting the plan's vendor and advisors is a "deemed" fiduciary. There is no way that business owners and management personnel like CFO's and human resource professionals meeting this definition can avoid responsibility for making the right decisions regarding participant investment choices. To choose a plan vendor for any other reason presents a looming liability—and the liability is a personal one. As others confirm what to us is now obvious, open architecture should become a legal requirement for any 401(k) plan. Alternatively, plan investments limited to one fund company may prompt an awkward pause before a fiduciary answers the question: "Did you choose these investments in the sole interests of participants?"

How 401(k) Plans Work Getting to the Max

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Understanding plan basics sets the stage for minimizing the lost opportunity costs of not using a 401(k) to its maximum advantage. Often, plans fail their testing requirements and top-paid management people have some portion of the contribution returned. Then they have to pay taxes that they thought they had saved. Unfortunately, the group of people affected by this unpleasant happenstance is a group that most companies are most anxious to please. Every step should be taken to make sure a plan meets its expectations from a testing standpoint.

401(k) Basics

401(k) plans have certain characteristics:

1. Significant contributions can be made—far more than most people think
2. Contributions are pre-tax and compounding plan earnings are tax deferred
3. Plans have to pass tests that prevent them from being just for top management

Significant Contributions:

The maximum voluntary 401(k) contribution for 2014 $17,500, and the "catch-up" contribution for people aged fifty or older will be an additional $5,500 for a total of $23,000. There is no percentage of income limitation, so even someone working part time could contribute 100 percent of their income up to whichever dollar limit applied.

Beyond the voluntary contribution, all 401(k) plans can offer either a matching contribution or an "employer discretionary" contribution.

A matching contribution is an amount contributed by the employer in lock step with employee voluntary contributions. A typical match might be one dollar from the employer for each dollar contributed by the employee. Usually, the match is capped at either a dollar amount or some percentage of employee income. For example, there would be a dollar for dollar match until the match reached 4 percent of an employee's annual income.

A second type of contribution would be an employer discretionary contribution (often called a profit-sharing contribution) that the employer deposits for everyone. Even an employee making no voluntary contribution would benefit from this profit-sharing bonus deposited into his or her account in the plan.

A profit-sharing contribution can be for a dollar amount equal to as much as 25 percent of an employee's annual income. In many cases, company owners or managers will deposit the maximum for themselves and achieve (combined with their own voluntary 401(k) contribution) a total plan maximum contribution of $55,500 for the year.

Contributions are Pre-tax and Earnings are tax-deferred

Voluntary employee contributions into a 401(k) are deposited before any calculations of federal and state income taxes. Social Security and Medicare are charged, however, on the original gross income regardless of any reduction created by a 401(k) contribution. All company contributions, whether match or employer discretionary, are pre-tax for all tax calculation purposes. A typical employee contribution, especially in a state that adds its own income tax to the federal tax, will usually mean a 35 percent combined marginal tax savings for a typical participant. A $1,000 contribution will only cost the participant $650 in take-home pay. The remaining $350 is money that would otherwise have been paid in taxes.

For the employer contribution, the tax savings are far greater because we can add both the employer and employee share of social security and Medicare to the tax savings calculation. The combined employer and employee cost of social taxes is 16 percent and this is a tax on the first dollars employees earn. The combined total of all tax savings on an employer contribution amounts to about 50 percent in most cases.

Money earning 10 percent doubles every 7.2 years. Over a 401(k) lifetime of savings, the original contributions double repeatedly such that the first $1,000 will have accumulated to $64,000 in about 42 years. All of these compound earnings build on a tax-deferred basis. The long-term tax advantages of 401(k) plans generate four times as much money as the same investor would have if:

1. They started with $1,000—paid taxes and saved what was left.
2. Paid taxes each year on what was earned on what was left.

In the above $1,000 example, the participant who winds up with $64,000 in a 401(k) would have had $18,000 after struggling to save after-tax money.

It's true that retirees will have to pay taxes years downstream when they start living on the money, but our most important consideration in old age is that we have enough money—the largest possible nest egg. The fact that we may have to pay taxes on the income it generates is a delightful problem to have. A far worse alternative is to have an inadequate supply of money in retirement.

401(k) Testing

The voluntary contributions of senior executives and company owners can be severely limited, if not prohibited, thanks to testing requirements of these plans. By testing, we mean the non-discrimination tests that assure that the plan is being used effectively by all employees rather than just a limited highly paid group.

In a separate chapter on testing, we will explain this complicated requirement of 401(k) operation, but testing for a well promoted, well-designed plan rarely presents a problem. In most cases, a plan that limits executives to contribution amounts below the legal maximums is simply reflecting design features or a failed promotional and educational effort.

Summary

The 401(k) phenomenon has been a key ingredient in preparing Americans for the financial demands of retirement. The average retiring American worker has five times more money than would have been the case in the pre-401(k) years. While long-term government and major corporate workers obviously are an exception to this five-times statistic, they represent a relatively small proportion of the total American work force. Most people work for small companies, change jobs an average of once every seven years, and never would have accumulated much of any retirement benefit without the opportunity of the "portable pension plan" envisioned by the legislators who gave 401(k)'s the seal of approval in 1978.

Basic 401(k) Testing 6

To assure that 401(k) plans do not discriminate against lower-paid employees, a 401(k) plan must pass certain NON-discrimination tests. If a plan fails these tests and ignores corrective measures, it can be disqualified and will lose all tax benefits. In most cases, however, an ignored or undiscovered test failure results in penalties and expensive legal fees.

Testing is complicated, but it serves a valuable social purpose. It prompts company owners and top managers to make sure that a 401(k) is effectively promoted. Without adequate employee participation, 401(k) tests will fail and employers and their management teams will miss out on what could have been their own 401(k) investment and tax-saving opportunities. The testing requirement, far more than the tax shelter or mutual fund performance, is by far the greatest contributor to the enduring success of 401(k) plans. For proof, just consider the comparatively dismal accumulations in contributory IRA's or after-tax mutual fund accounts—both of which offer the same opportunities but without the "booster rocket" of a testing requirement.

The basic 401(k) Test

The first test is the Average Deferral Percentage (ADP) test, and it involves three steps:

1. Identify a group of Highly Compensated Employees (HCE's)
2. Determine how much the Non-highly Compensated Employees (NHCE's) contributed to the plan
3. Determine how much the HCE's can contribute using one of three formulas

Who are the HCE's?

1. Owners of more than 5 percent of the company—plus any family member employees
2. Employees who earned more than $115,000 in the preceding year (2013)

All other employees are termed Non-highly Compensated Employees (NHCE's).

The engine that drives plan testing is the extent to which NHCE's contribute to the plan. We determine the average percentage contribution for this group.

Here's an example:

Employee		Salary		Dollar Contribution	Percentage Contribution
A	$	30,000	$	2,400	8%
B	$	40,000	$	2,400	6%
C	$	80,000	$	4,000	5%
D	$	50,000	$	0	0%
E	$	40,000	$	4,000	10%
F	$	60,000	$	600	1%
				Total	30%
				Average	5%

How much can this company's HCE's contribute?

One of three formulas can be applied depending on the range of the above calculation:

Possible ranges:

3. Greater than 2 percent and less than 8 percent
4. Less than 2 percent
5. Greater than 8 percent

The most common occurrence will be less than 8 percent and greater than 2 percent. (the average contribution nationwide is about 6 percent.) In this case, the HCE's are allowed an average contribution of no greater than 2 percent above the 5 percent. On average, they could contribute 7 percent.

Here is how the test might look:

Participant		**Salary**		**Dollar Contribution**	**Percentage Contribution**
A	$	200,000	$	16,000	8%
B	$	120,000	$	7,200	6%
				Total	14%
				Average	7%

The test passes! It is within the 2 percent allowable spread.

Two other tests might have been required. If the NHCE's had contributed an average of less than 2 percent, then the percentage could have been doubled (i.e. 1.5 percent would have allowed 3 percent for HCE's.) If the percentage for NHCE's had been more than 8 percent, the multiplier would have been 1.25 times to determine the allowable percentage for HCE's (i.e. 10 percent would have allowed 12.5 percent.

What if a test fails?

A failed test requires that the excess money be returned and the HCE's then have to pay regular income taxes on what they were told to take back. It gets taxed in the year in which it is returned. The good news is that the tax on the returned amount is at least deferred for a year.

What is the calculation for determining who, of the HCE's, has to take money back?

Giving back the money is accomplished on a dollar basis until the test passes its percentage requirement. That is not as simple as it sounds. One might think that, to be fair, the highest percentage contributors should give back the most money. Unfortunately, the higher percentage people of the HCE's are often the lower paid members of that group. Recognizing this, the IRS decreed that those contributing the most dollars in the plan gave back first until their dollar amount was reduced to the level of the next dollar-amount contributor—essentially a “waterfall” approach until the average percentage reached an acceptable level.

Testing Variations and Options

Deciding who will be eligible

Testing only has to include the people who are eligible for the plan. The most conservative eligibility can require that an employee work a full year and make it to January 1st or July 1st following one full year of employment. For some people, this can mean almost 18 months.

A long eligibility period can offer two advantages:

First, if there is any employer contribution to the plan, either a match or an employer discretionary contribution, (see introduction) then a longer eligibility will reduce the cost by not including short-term employees.

Second, knowing that a long eligibility is possible allows plan administrators to perform two separate tests. A plan with a short eligibility (say one month or immediate entry) can perform a separate test for all employees who have worked for the one month but have not reached the January or July entry date after the one-year requirement. This test will always pass, because there will be no HCE’s. Remember, an HCE is someone who made more than $115,000 in the previous year. If they are a brand new employee, regardless of their income rate, they will not have earned more than $115,000 in the previous year. There was no” previous year” for them, because they worked for some other company.

We have just performed a test on a group of short-term employees referred to as “otherwise excludable” because we had the right to not offer the plan to them. Now, we do a second test on the remaining employees that we do have to include because they meet the most restrictive eligibility period that the law allows—one year plus the January or July start date.

Dual testing will often correct an otherwise failed test, but most administration performed by major institutions fails to reflect this level of expertise and service. Over the years, Highly Compensated Employees have been "short-changed" for millions of dollars of what otherwise might have been allowable contributions for this reason. Every $1,000 of foregone contributions compounded could have easily accumulated to $10,000 by retirement time. By far the greatest cost of administration is the opportunity cost a lack of expertise.

Additional 401(k) testing considerations

Prior Year Data Option

Using prior year NHCE contribution percentages can ease administration by removing testing "surprises." In most plans, the current year's contributions are used to determine what the HCE's can contribute in the current year. However, an option is to use the previous year's NHCE's numbers so that the HCE's can be told at the start of the year what their average percentage opportunity will be. The disadvantage is that any efforts to re-promote the plan or increase the match will not have an effect until the following year. Using previous year data is a relatively new option, however most companies have stayed with the practice of using the current year compensation and contribution percentages.

Correcting the Test By Helping out the NHCE's

A failed test can be corrected by a Qualified Non-Elective Contribution (QNEC—pronounced "Que Neck") which is a company contribution into the plan for all NHCE's until the total of their voluntary plus the QNEC equals an average percentage that justifies the HCE's percentage. As a general rule, this is a costly corrective measure, but not always. It is the ONLY corrective measure for a plan that has failed testing and allowed any corrective measures to extend beyond twelve months of the plan's year-end.

Catch-Up Contribution

The $5,500 "stealth" deposit. For everyone aged 50 or over, the $5,500 catch-up contribution does not have to be counted in the testing. It can also be considered as the first portion of the contribution. So a HCE over age 49 who contributes $15,500 only counts $10,000 for testing purposes.

Summary

Testing is the soft underbelly of the 401(k) phenomenon. It would be nice if there was some inexpensive way to avoid it; but the bright side of testing, if there is one, stems from the practical reality that company ownership and management has had to offer plans to a majority of employees and encourage them to participate. Without that support, managers themselves would not have been able to benefit.

The key to successful testing is to make sure that it is being done successfully with all possible testing techniques being considered and applied where necessary. In far too many cases, money is being refunded unnecessarily to the HCE's—the last group of employees (or owners) that any company wants to annoy.

More Testing Requirements for Some Plans

7

Specialty Testing—an Issue with Some Plans

It's not enough to master the 401(k) testing requirements. Just beyond those covered by the previous chapter there are the tests required of ALL retirement plans. Remember, Section 401(k) of ERISA simply says that if a company has a retirement plan, employees can make voluntary deposits. The tail is wagging the dog, of course, because many of these retirement plans have nothing more than employee voluntary 401(k) contributions. Even 401(k) retirement plans with no company contributions of any kind must adhere to pension laws that fill four phone-book-sized volumes. This explains why most 401(k) vendors bury hold harmless language in their contracts reading "the design and operation of your 401(k) plan must be reviewed by your tax and legal advisors."

Top-Heavy Test

In smaller companies, a top-heavy test applies which is often confused with the regular 401(k) test limiting highly compensated employees.

The top-heavy test is entirely different. It applies to company owners who own more than 1 percent of the company and make more than $150,000 and all owners who own more than 5 percent, plus any officers making more than $170,000. These are defined as "key employees" who are almost always Highly Compensated Employees (HCE's). However, all HCE's may not be key employees because they just are employees who make more than $115,000. Got it?

Now then, when Key Employees have accumulated, as a group, more than 60 percent of all of the assets in the entire plan, the plan is defined as being "top-heavy." In a year following the year in which the asset accounting calculations determined that the plan was "top-heavy," the key employees have two choices for that year as follows:

1. They deposit no money into the plan until a year following the year in which the combined total of their accounts dropped below 60 percent of the total.
2. They can agree to deposit an amount equal to at least 3 percent of annual compensation to all non-key employees eligible for the plan.

Most elect to deposit the 3 percent and decide to make the same 3 percent contribution for themselves as well. The top-heavy problem strikes smaller companies whose owners and officers have been around for a long time. With relatively high turnover, it is not unusual for the current non-key employees to have a relatively small (less than 40 percent) proportion of the total assets in the plan, and this triggers the 3 percent top-heavy minimum contribution.

Coverage Test

The coverage test is one that determines whether or not enough employees in a company have been offered the plan. It may come as a surprise to learn that not all employees eligibility time periods have to be covered, and therefore the cost of company contributions and administrative fees can be reduced. In addition, if a group of employees is excluded which, as a group, is less inclined to participate voluntarily in the plan, then the plan also stands a better chance of passing all of its testing requirements. Remember, only eligible employees are included in testing, but an eligible employee contributing nothing is a 0 percent contributor who drags down the averages.

The plan can't "name names" when deciding to do a carve out, but it can exclude, for example, all hourly employees or all employees in shipping and receiving.

It is generally understood that union employees covered under a collective bargaining agreement can be excluded automatically, but beyond this, up to 30 percent of a regular work force can actually be excluded as well. In fact, some plan designs would bump that 30 percent to an even higher figure.

How does a "carve out" work?

Section 410(b) of the Tax Code says that the coverage requirement is met if the percentage of NHCE's offered the plan is at least 70 percent of the percentage of HCE's offered by the plan. In almost all cases, an employer would want to make the plan available to all (100 percent) of the HCE's, so this would mean that 70 percent of the NHCE's would have to be covered.

If a few HCE's were excluded, say, 2 out of 10, then the plan covered 80 percent of the HCE's. Seventy percent of this 80 percent figure would mean that only 56 percent of the NHCE's would require a 401(k) plan opportunity.

The math can get complicated, but in some companies, there may be two different plans operating that have different matching and company discretionary contributions. With different HCE's being covered in one plan and excluded from the other, the percentage eligibility or participation numbers that apply to NHCE's can be relatively low.

Leased Employees are often carved out of plans, but the gross mistake often made is that they "work for someone else so they don't need to be considered for our plan." Leased employees, in fact, are like any other employee from a coverage standpoint. You can carve them out if they amount to fewer than 30 percent of your work force, but the same rules apply as if they were on your payroll.

Instead, they are mistakenly treated like union employees, who can, in fact, be entirely excluded from all plan testing and coverage requirements.

Separate Lines of Business

When a portion of a company is considered to be distinct from the main portion of the business, it is possible to exclude those employees or offer them a different plan. To use this provision, the following criteria must apply:

1. There must be at least 50 employees who are eligible for the plan
2. The separate division must be at least 50 miles away
3. The separate division must be in a different business

Solving a Coverage Test Problem

When coverage testing becomes an issue, the solution is to allow enough employees into the plan to meet the minimum percentage calculations outlined above. After having carved out a group of employees, it is possible to bring enough back into the plan to meet coverage requirements. Mechanically, this step involves bringing in typically the lowest-paid of the excluded employees and contributing for them an amount equal to the average percentage contribution contributed by the group of regular eligible NHCE's.

Custom 401(k) Tax-Saving Opportunities

8

A Need for Improvement

Needless to say, 2008's historic shift in financial markets left many plan participants feeling like they are digging themselves out of a hole. A well-designed plan, adopting newly legalized design features, can accelerate the "healing process" by increasing the contribution opportunities for all plan participants.

Cross Testing (Age Weighting)

The most common of the new plan features is known as "cross-testing" which recognizes the fact that older employees, as a group, have fewer years until retirement. In most companies, this older group consists of company owners and key managers. The company can identify this key management group (which may be limited only to owners) and can contribute an amount equal to as much as 25 percent of annual compensation for this group. An owner paid \$138,000 per year would receive a \$34,500 401(k) plan contribution. In addition, they could contribute their \$17,500 voluntary contribution for a total of \$52,000, which is the dollar maximum. (Plus the \$5,500 "catch-up" for those 50 and over.)

What's the catch?

In order to make this contribution, the owner must contribute an amount equal to at least 5 percent of annual compensation for all employees who have reached January 1st or July 1st following two years (24 months) of service. In most businesses, an employee who lasts for two years deserves an increase in compensation under any circumstances. In this case, the "raise" would be a contribution into the retirement plan. From that point forward in future years, 95 percent of the employee's compensation is paid as regular taxable income and the last 5 percent is the retirement plan contribution.

Viewed in the context of overall compensation strategy, there is no additional cost of this 5 percent. Everybody wins. An employee who would otherwise have preferred taxable cash for personal reasons, but who has been regularly contributing voluntarily to the 401(k), could dial down their voluntary contribution to create the net effect of receiving the 5 percent in cash. Bottom line: There is no catch. It constitutes an innovative blend of compensation and retirement plan policy.

The example above is just one of infinite variations on the age-weighted theme. The 5 percent requirement can be as low as 1 percent, but any employee contribution less than 5 percent limits the top-paid group (the owners, typically) to a three times multiple. For instance, a (very common) 3 percent contribution for everyone results in a 9 percent contribution for owners. This feature can be added to any current 401(k) plan. Even a plan that has immediate eligibility for voluntary contribution purposes can limit the company contribution to those who have been on board for as long as two years (plus reaching January or July—a thirty month wait.)

Catch-up Contributions for Ages 50 and Over

Beyond all contribution maximums cited above, those who are 50 or over can contribute an additional $5,500 voluntary contribution. For the "catch-up" deposit there are no testing requirements whatsoever. It raises the total maximum annual contribution to $57,500.

Safe Harbor

Every effort is being made to encourage employee participation and to reduce the complexity of plan administration. So-called "safe Harbor" plans are those that have a generous employer contribution that then wipes away the 401(k) testing requirement. One type of safe harbor contribution also takes care of the "top-heavy" test. Remember the difference? The 401(k) test involved HCE's/NHCE's. The top-heavy test involved key employees and their 60 percent of plan assets threshold.

The first original version of Safe Harbor called for one of the following employer contributions:

1. A contribution to the accounts of all eligible NHCE's equal to 3 percent of their annual income, regardless of whether they are contributing voluntarily to the plan
2. A two-stage matching contribution consisting of:
    a. One dollar for every dollar contributed by the NHCE up to 3 percent of income
    b. Fifty cents for every dollar contributed by the NHCE between 3 percent and 5 percent of income.

Here's an example of #2, the match alternative: An employee making $50,000 and contributing $2,500 (5 percent of pay) would receive a dollar for dollar match on the first 3 percent ($1,500.) They would receive 50 cents per dollar on the next 2 percent (on $1,000 the match would be $500.) The total matching contribution would be $2,000.

By doing away with testing requirements, a Safe Harbor plan guarantees that Highly-Compensated Employees will always be able to contribute the maximum allowable under the law. Electing the 3 percent company contribution (option #1) also satisfies the 3 percent minimum top-heavy test and sets the stage for a cross-tested contribution.

The employee notification requirements for safe harbor plans require careful attention to deadlines. For an employer discretionary contribution (Option #1, employees must be told by thirty days prior to the beginning of the next plan year (typically by December 1st) that the company MAY decide to deposit the safe harbor 3 percent for the coming year. This is referred to as a "wait-and-see" Safe Harbor. By December 1st of the plan year, they must then let employees know if they are actually going to make the contribution for that year. If they decide not to, then the regular testing applies. If they make the contribution, then no testing is required. They have until they file their company tax return, including extensions, to actually deposit the 3 percent.

Automatic Enrollment

Some companies have adopted the policy of automatic enrollment when employees become eligible for the plan, while at the same time allowing employees to opt out or to increase their contribution amount. This approach has generated dramatic improvements in the participation rates for obvious psychological reasons. The employee is also provided with a default investment choice, which the U.S. Department of Labor has determined must be some version of a balanced mutual fund.

Automatic Enrollment Including Safe Harbor

Beyond the automatic enrollment itself, there is the possibility of a Safe Harbor option that requires employers to begin with at least a 3 percent automatic contribution and steadily increasing it over the years to as high as 6 percent. Adopting this approach slightly reduces the match requirement to meet safe harbor. Because of the notice requirements and the complexity, few companies have adopted this approach.

Cash Balance Plans

Beyond cross testing, there is an opportunity for even greater contribution levels for company owners—as much as $180,000 per year. These contribution levels can be created with Cash Balance plans that typically operate in tandem with existing 401(k) and Cross-Tested plans.

How does it Work?

The typical business owner interested in one of these aggressive attempts to contribute as much as possible into a retirement plan will usually be someone who has worked for many, many years to build a business or a practice. We can reward for past service and give him or her credit for all those years of service. In effect, we are saying that we now want to catch up and deposit, in the few years left, what we otherwise should have been depositing over the years to generate a sufficient retirement nest egg.

For someone planning to work for another five to seven years, we could calculate the lump sum of what those hypothetical past year credits. Then, we calculate how much we will be earning over the next five to seven years and giving ourselves retirement credits for those years as well. The total nest egg that we are scheduled to have by the end of seven years, let's say, is $1,000,000. To accomplish this, we need to deposit (including earned interest) about $150,000 per year. Pension laws allow us to fund for the future benefit we have determined will be provided by this scheduled nest egg.

What's the Cost?

That's fine for the owner, but what about the other employees? What do they have to receive? In most cases, the other employees are a.) younger with b.) far fewer years of service and c.) only 40 percent of them have to be covered.

Once we have determined who needs to be covered and what the contribution for each will be based on age and years of service, we can then look to see how much of the 3 percent Cross-Tested or Safe arbor contribution we are already contributing for them. We can count this money toward what they would be receiving as participants in the Cash Balance plan. Voila. A six figure contribution for business owners might cost as little as $10,000 to $30,000 more in employee retirement bonus contributions.

These plans can be excellent tools for funding the transfer of business interests. It's a win-win solution in that the contribution to the retiring owner is tax deductible to the organization and tax-deferred to the recipient. Without exception, all other approaches to paying a purchase price amount to less favorable tax treatment for either buyers or sellers.

Summary

Too many 401(k) plans fall short of expectations because decision-makers are never aware of all their options. All too often, retirement plans are chosen based upon the least expensive administrative cost to the employer and industry statistics confirm the fact that over fifty percent of all plans are chosen on this basis. That's it. Once that choice has been made, the decision-maker can abandon any hope of ever receiving the full spectrum of ideas, investment products and advice that will lead participants to achieving meaningful retirement goals. The greatest on-going cost of a 401(k) plan is the opportunity cost of having limited the potential of the plan.

Investment Fundamentals

9

Basic Fundamentals

Investing 401(k) money successfully is so simple it's almost criminal. Your best bet for stocks, according to Warren Buffet, is to invest in an S&P 500 index fund (an unmanaged cross-section of the five hundred largest companies) and your money will double at least once in every average rolling ten-year period of time. Enjoy the smug satisfaction from knowing that will do better than 85 percent of all other attempts to manage stock-oriented investments. We can generally ignore the contortions of the financial services industry—their self-serving efforts make them the 85 percent we will outperform over time.

To protect against severe downside losses, but still retain enough "in the game" to ward off the ravages of inflation, the magic investment mix is one-third bond funds and two-thirds stocks. In rising markets, you won't do quite as well as investing totally in stocks, but this combination will cut your losses by about half during a market downdraft. For someone wanting to hedge against the two greatest risks to wealth—inflation and stock market collapse—this combination is the most rewarding antidote.

If these two fundamentals make up the cornerstone of your investment philosophy, and if you practice them religiously, you will look back after twenty or thirty years knowing that you have achieved at least 80 percent of what you set out to do. For the last 20 percent of what you want to accomplish, we can learn and practice some techniques that will help you achieve 100 percent of a reasonable long-term goal.

If investing is this simple, why aren't we rich?

In the search for the perfect mix of stock and bond mutual funds, it pays to develop some self-awareness with regard to how the mind works when we think about money. The fastest-growing area of economic theory today involves the world of behavioral economics—how our brains can throw us off when we struggle to make what we think are intelligent financial decisions.

This may seem obvious, but studies show that the average person gets emotionally distraught when they lose money, and that that emotional experience is never fully offset by the anticipated or actual pleasure they experience from enjoying a successful investment. A variety of tests show how people give up potential gains to protect against losses. This mindset is a major contributing factor when investment results fall short of expectations. It explains why, during the '80s and '90s, the average mutual fund investor earned an average of 3 percent while the average mutual fund during that period rose an average of 15 percent per year. The average investor, shell-shocked by the slightest losses, would immediately sell and begin chasing the previous year's winner.

It's Time to throw some Darts

In the late '60s, some Stanford economics professors threw darts at the Wall Street Journal and bought what they hit. They proved that stocks bought randomly and then held indefinitely would outperform 85 percent of all efforts to manage money over rolling ten-year periods of time. They went on to win five Nobel Prizes in economics for experiments largely derived from the dart-throwing exercise. In more recent years, they have been routinely using a chimpanzee to pick the stocks and the results have confirmed their original experiment.

Basically, the study showed that 70 percent of any single stock's performance is a result of the movement of the entire stock market. If the overall market is dropping in value, there's a 70 percent chance that your stock (or mutual fund) will be going down regardless of how profitable the company might be at the time. A rising or falling tide moves all the ships up or down.

Let’s Not Kid Ourselves or Be Lead Astray by Others

What is now called the “efficient markets theory” explains why this 70 percent factor exists in the face of what some would like to convince us is a world of great “stock pickers.” Basically, every transfer of stock represents the following transactions: The first is a decision by a very smart person that it’s time to sell a block of stock. At the same time, another very smart person has decided that the same stock is a great buy. Notice I said “smart.” There are no dumb people anymore, because the bulk of all stock is managed by institutions like mutual funds, endowments, pension funds and other large investors. Highly-paid professional analysts with sophisticated computer programs and other information resources provide the basis for both sides of the sale and purchase. At any given time, this collective wisdom on both sides of the transaction is providing an efficient and generally-correct valuation of a company’s value. We’ll talk about “market inefficiencies” in the next chapter.

There are still some hopelessly outgunned people who invest as retail investors, day-traders, or people who were the subject of a great Wall Street book entitled, “Do You Want to Make Money … Or Just Fool Around?” Occasionally there are periods when small investors confuse rising markets with their own genius. When “The Little People” do get caught up in the hysteria of Wall Street, professional investors can make far more money at the expense of these amateurs. During such times, professional insiders gleefully report, “the fish are back.” Fortunately, for the Stanford Professors, amateurs make up a relatively small proportion of the investment community so their buffoonery doesn’t get in the way of the “efficient markets” outlined above.

“Efficient Markets,” then, mean that nobody has an edge on future profitability or stock performance of a company. Someone who has beaten the market (that rarified 15 percent above the 85 percent cited above,) may have just gotten lucky. If Tiger Woods maintains that a lot of successful golf is just luck, why should we expect an investment result to be solely the result of skill? Some cases in point have been illustrated dramatically during the collapse of 2008. Some of the long-term performers who made up the 15 percent of winners for many years have now proven to be the greatest losers this time around. Who could have known?

How the Stock Market Works

10

How the Market Makes Billionaires of Some and Wipes Others Out

Do you ever wonder how a twenty-six year-old Silicon Valley Software engineer can become worth a billion dollars seemingly overnight? He or she may have been one of a handful of employees working for what had been the garage-band equivalent of a start-up only a few years earlier.

By the same token, we have recently suffered through the experience of watching the entire stock market plummet by 22 percent in the single month of October 2008. That's nothing. On October 19th of 1987, the market lost 27 percent in a single day.

To understand how these extraordinary determinants of wealth, both positive and negative, can take place, we can start with an appreciation for a stock valuation mechanism referred to as "marked-to-market." It means that all outstanding stock in a company is valued based on the share price of what is being bought and sold at a given time. For public companies, only a miniscule fraction of their total stock actually sells on Wall Street on a given day—far less than 1 percent. It may amount to big money, but it's always a very small percentage.

Yet, while this sliver of stock changes hands throughout the day, the last transaction is listed as the day's closing price. That then determines the value of ALL shares of that stock for whoever happens to own it. At day's end, our mutual funds, owning stock in hundreds of companies, will be valued based on the total number of shares and the closing price of each company owned by the fund.

Marked-to-Market

Overall, a system that uses a stock market sale to determine a value for entire companies may not be a perfect system, but it's the best that we have. To see how imperfect it can be, consider a simplistic application of a marked to market mechanism to better understand the concept:

A brand new home in a housing development, complete with furniture, sells for $100,000. The $100,000 includes a couch that was worth $1,000 or 1 percent of the home purchase price. The new owners put the couch up for sale at the end of the driveway because she just doesn't like it. A neighbor buys the couch for $500. If the value of the home was "Marked-to-market" and 1 percent of the package just sold for $500, then the entire house is suddenly worth $50,000. If the couch had sold for $1,500, the house would have risen in value to $150,000. In other words, the sale price of whatever part of the house was for sale determined the value of the entire house. Back on Wall Street, the demand for whatever part of the public company was for sale determined the entire value of all outstanding shares in the company. By comparison, a private company with no stock sold on Wall Street can only be valued based on what an outside appraisal (or their banker) thinks the entire company is worth. The true value is what a willing buyer would pay a willing seller for the whole thing.

Do You Want to Be a Billionaire?

The marked-to-market concept is the Pixie Dust that creates wealth in the public stock markets. So, here's how the journey begins for those young billionaires:

Three people with a product idea round up $150,000 and start a company. They actually get off the ground to the extent that they talk a venture capital firm into giving them $2,000,000 for a twenty percent interest in the company. Those three founders still own 80 percent. So, if 20 percent just sold for two million, market-to-market would make the remaining 80 percent worth eight million. See where this is heading?

Because of some initial success of the company product, another round of venture capital buys 10 percent of the company for ten million dollars. This makes the remaining stock suddenly worth ninety million dollars (of which the founders now own $50 million and the original venture people own $30 million.

Next, the company "goes public" in an Initial Public Offering (an IPO) that raises $30 million from the sale of 20 percent of the company to the public. The three founders still own 50 percent. The other 30 percent is owned by the earlier venture capital investors. If 20 percent sells for $30 million, then the entire company has to be worth $150 million.

The three founders, still owning 50 percent, have a value on paper of $75 million, because their stock, marked to market, has the same value as the most recently traded shares. If the publicly-held stock doubles after the IPO, the entire company will be worth $300 million and the founders will be worth half that, or $150 million. If the stock, like Google and YouTube, rises by ten times its IPO price, the original offering price, then the company will be worth $3 BILLION. The owners will be worth half that amount, and you have what is coming to be known as "the accidental billionaire."

Meanwhile, back in the industrial park, nothing has changed. The total invested capital is only $42,150,000, but within just a few years, it has turned into something like $3 billion in value.

How the Rest of Us Can Lose 40 Percent in a Year

The stock market can create wonders for all of us in the long run. In spite of its imperfections, it tends to generate earnings of around 10 percent per year as an average over long periods of time.

Why have we seen such a dramatic, across-the-board plummeting of stock values since September of 2007? The culprit? A marked-to-market valuation mechanism. The supply and demand for stocks became disconnected from the intrinsic value of the companies whose value they were, in theory, representing. Actually, the majority of companies in 2008 made higher profits than they did in 2007. Why, in the single month of October 2008, would the entire stock market drop an average of 22 percent? The supply of stocks that institutions were desperate to sell far exceeded the amount that people wanted to buy. Except for Warren Buffett.

Warren Buffett has made the bulk of his fortune over the years by recognizing times when the market was suddenly inefficient—when it was suddenly and temporarily no longer an effective measure of the underlying value of companies. This is why, in 2008, Mr. Buffett invested billions in companies like Goldman Sachs and General Electric.

Here it is in Mr. Buffett's own words: "The future is never clear. What we do know today is that there are well-managed companies that consistently make money, and the stock market values them periodically at foolishly high or low values."

Thank back about the couch and the house. We know that a house doesn't have huge swings in value based on the sale price of just a piece of it. In business, there can be times when two entirely different prices can apply to the same company. Like an entire house that we know has a basic value, an entire company can have a specific value based on its ability to sell a product and make a profit. Over on the stock market, however, an entirely different value can be established because of an oversupply of stock coupled with a low demand for stock in general.

Summary

The current economic situation presents one of the best views ever into the workings of Wall Street and the basic fundamentals that we depend upon to generate the wealth needed to meet financial goals in retirement. Understanding the occasional disconnect between companies themselves and the stock they have for sale on Wall Street can help us ride out these swings in value.

Of the five major stock market crashes since 1973-74, the following twelve months after the absolute bottom of the market saw an average rise of 38 percent. The second twelve months' return averaged 11 percent and the third year's return was 4 percent. In the end, the market "reverts to the norm." An "invisible hand" of economic forces rewards those who accept some risk and generally pays them an average of 7 percent above the rate of inflation. The long-term rate of inflation has averaged 3 percent. The combination can provide us with a total of 10 percent per year—with needless to say, some major ups and downs along the way.

To summarize, here's some final advice from a great book, "The Warren Buffett Way:"

"Fear and greed move stock prices above and below a company's intrinsic value. In the long run, the value of stock holdings is determined by the underlying economic progress of the underlying business; not by the daily stock market quotations."

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Time, Risk and Return Meet Cash, Bonds and Stocks

When crafting an investment strategy, the starting point is to recognize the basics of time, risk, and return. Then, understand the relationship between different investment types and the extent to which they meet the demands of time risk and return.

The time frame for most 401(k) savers is a period well into the retirement years—not just the day after the retirement party. The risk factor is a measure of both practical and psychological assessments. Most people who, in rising markets, say they can handle plenty of volatility find this to be definitely not the case when markets are plummeting. Rate of return is the expected annual profit from the combination of investments that make up a nest egg. These three investment fundamentals are the engines that drive the decision-making process leading to successful preparation for retirement.

The Warren Buffett quotes that follow only make sense if you have a clear understanding of your time frame and a firm belief that history will repeat itself. Why believe anything else?

"If you expect to purchase stocks throughout your life, you should welcome price declines as a way to add stocks more cheaply to your position."

Return

Return comes to investors when they own something or loan something. We own something when we invest in stocks. We loan something when we invest in bonds. A variation of a bond is a money market fund, which is nothing more than a loan for a very short time – a few weeks or months. Because it entails no risk, it is referred to as “cash.”

How Mutual Funds Generate Returns

Owning Stocks in the context of a 401(k) plan means owning a mutual fund that invests in stocks. A mutual fund is a professionally managed investment pool that purchases stocks in hundreds of companies across the country. As you contribute money to this pool by buying shares in your mutual fund, your investment is spread over all the stocks the fund owns. Every business day, the value of the entire pool is valued at the end of the day. The total amount in a single fund could be well over a billion dollars. You actually own what would be a small percentage of all those stocks, and the value of your investment would go up or down on a daily basis as the stocks owned by the fund change in value.

The advantage of a mutual fund is that it offers diversification. This allows even small amounts of money to be spread out over hundreds of different stocks—something that would never be possible as an individual investor. It spreads the eggs out over many, many baskets automatically. The security comes from the fact that the underlying stocks purchased by the fund secure the investment. The investor’s account is always worth its proportionate share of all stocks owned by the fund. Every stock owned by the fund would have to drop to zero in value before the mutual fund would lose everything.

The Basic Investment Types

Cash is what used to be held in savings accounts. It is available anytime and never drops in value. In 401(k) plans, money market funds are used in place of savings accounts. Cash is appropriate for meeting a 2 to 4-year investment goal.

Bonds are loans for specific periods of time. A mutual fund investing in bonds can experience changes in its capital value, but it will pay higher interest percentages than cash.

Stocks are the best investment option for longer-term goals beyond 7 years. Stock mutual funds are the most profitable, but they can lose the most in single years.

The Basic Investor Types

Conservative Investor: "I need to know that my investments are increasing steadily each year. I realize that this psychological requirement will mean lower returns in the long run."

Moderate Investor: "I am willing to accept occasional losses knowing that accepting this risk is the price I pay for higher returns over time."

Aggressive Investor: "I am seeking maximum long-term gains and will not be concerned about short-term losses."

The Loss Probability Recovery Rate is illustrated by the following chart. We have been through seven major stock-market crashes from 1973 to the present. In each case, when we have been able to look back and identify the exact day of the bottom of the market, we find that the average rate of return for the following twelve-month period has been 39 percent. The second twelve-month period following the crash has seen an 12 percent gain. While some of the crashes were more severe than others, these were the averages. The greater the crash, the greater the "snapback." From 2008 until March 2009, the market lost almost 50 percent, the greatest loss since the Great Depression of the 1930s. The most recent snapback, however, has been 180 percent over four and a half years.

While adding bonds to a stock portfolio can blunt the effect of a stock-market crash, they will also reduce what can be expected for a total portfolio return. Review the following matrix carefully, and use this information to develop a sense of what level of short-term "investment pain" you can tolerate in return for longer-term gains.

Investment Mix	20-Year Average Return	2002 Loss	Total Return 1/1/2002 to 12/31/2005	Total Return to 2010 over 20 Years
100% Stocks	11.10%	-17.21%	72.79%	820%
80% Stocks 20% Bonds	10.23%	-13.75%	63.64%	700%
60% Stocks 40% Bonds	9.35%	-9.64%	53.64%	579%
40% Stocks 60% Bonds	8.47%	-4.66%	42.69%	508%
20% Stocks 80% Bonds	7.60%	1.50%	30.63%	432%
100% Bonds	6.72%	9.30%	17.30%	367%

This chart illustrates that the conservative portfolio of 100 percent bonds lost less and corrected faster, but over twenty years, it accumulated about one-third less money than the 100 percent stock portfolio.

This grid is important to review carefully. Ask yourself how you would feel in a major market downturn. Is it worth it to you to lose 30 percent or more if you stand to have twice the account balance in twenty years? Do you have twenty years left before retirement?

Reducing Risk and Increasing Return

Investment Style

Having illustrated the tradeoffs between varying allocations of stocks and bonds, it is important to know that it is possible to reduce stock market investment risk and still retain higher returns.

The "secret sauce" of this more sophisticated level of 401(k) investing starts with an understanding of how mutual funds offer different styles of investments. The style of investment is the second most important influence on results beyond the overall movement of the market.

Value investors specialize in large companies that have recognizable value in the form of cash, factories, brand recognition and relatively little debt.

Growth investors focus on growing companies that borrow as much as possible and reinvest profits in more capital equipment, people and space.

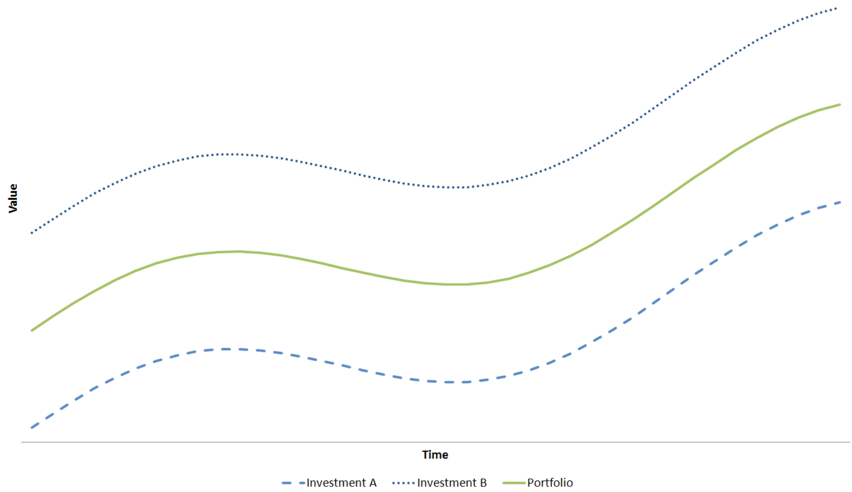
The different investment styles can be summarized by the now common "style box."

Blend is obvious, and the three disciplines can be applied to large, medium and small companies.

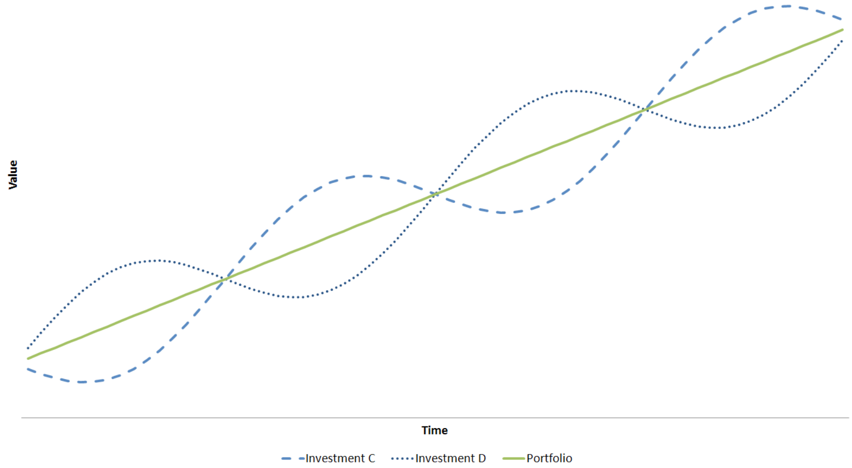
	Value	**Blend**	**Growth**
Large			
Medium			
Small			

Style is important because we are continually moving through economic cycles. Like weather changes, they never stop. At any given point in a cycle, one style combination will be a winner over all others. Six months later, during a different period of the cycle, another style combination will triumph.

We can use our knowledge of investment styles to craft an investment strategy that will take advantage of interlocking or "inversely-correlated" rates of return between different investment styles. The following graphs illustrate, on the one hand, what would happen if we invested in two mutual funds having the same style.



Then, if we chose two funds with different styles, the results would look more like this:



The line up the middle (in both graphs) represents the rate of return for both funds combined. It is easy to see that when combining styles, we create an aggregate result that looks more like a straight line. We refer to this line as "The Path of Minimum Regret." Anytime we can choose investments in a way that creates total results looking more like a straight line, we have, by definition, reduced our risk.

Style-based investing is known as Modern Portfolio Theory. Prior to the realization of the importance of investment style, conventional wisdom held that the only way to reduce stock market risk was to retreat into cash once convinced that the market was headed down. Then, when finally convinced that that market was on its way to recovery, the average investor was inclined to jump back in. The problem? Most people don't throw in the towel and bail out until they've already lost 20 percent or more. Then, when the market does begin its rise, a major portion of the increase occurs in the first few weeks of the turnaround. Most that bailed out are the last to get back in. Timing the market is a losers' game.

For a real-time example, we can look at the last few years of the '90's and the crash that began in 2000. Van Campen Comstock was a small cap value fund that had exactly zero as its rate of return in 1999. By comparison, Janus Twenty was a Large Cap Growth fund that had a 60 percent return in 1999. Remember those days? The following year, Van Campen Comstock was up 30 percent and Janus Twenty lost 30 percent, a 60 percent flip flop from one year to the next. Over the next two years, while the overall stock market lost 35 percent, small company funds generally returned 20 percent per year. They finally tapered off when the rest of the market started the dramatic rise that ended in September of 2007.

Rebalancing – How it can make a difference

Once a 401(k) account has been allocated across an assortment of fund types and styles, from year to year the original allocation percentages will be changed, as winning funds become a greater percentage while funds that have lost money will represent a smaller percentage of the total.

Rebalancing to the original percentages can make sense for a variety of reasons. First, to sell a small amount of a winner and buy a little more of a "loser" means that we are effectively "buying low and selling high." To do this religiously is the holy grail of all investors.

Apart from the investment mechanics outlined above and the probability of greater investment success, there is the psychological value of doing something constructive at least once a year with the money in the 401(k) plan. Rebalancing has been shown by some models to increase results when practiced over many years, but its primary value is to remind us that we are long term investors and that we are doing something constructive without trying to second-guess where the market is headed, short-term. To worry about the latter is the kiss of death for the amateur investor.

Dollar-Cost Averaging

When mutual funds drop in value, this is a good thing for 401(k) investors. New inbound money per pay period is buying mutual fund shares at lower prices. As "goofy" as this may sound, in the early years of a 401(k) experience, we want to pray the stock market crashes from time to time. Shares purchased during each crash reduce the average cost of all the shares we own. These are shares we will be selling years later as we nibble away at our retirement accounts to fund the well-deserved eccentric personal lifestyle of our choice at that point.

Summary

Having the right attitude by maintaining a long-term view contributes more to investment success than any advanced degree in investment management. Some of the most successful 401(k) participants will be those who just "set it and forget it." When asked what he thought the stock market was going to do, J.P Morgan once said, "It will fluctuate." Those fluctuations are what guarantee success for the patient, methodical 401(k) contributor over time.

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