Compass Check: North, South, or LDI?
Pension funds have renewed their focus on liabilities in driving asset allocation decisions. We review what liability-driven investing (LDI) is and isn’t, and highlight one solution plans are currently exploring.
–Joe Dougherty, MBA ’08

The Paradigm Shift: Defined Contribution Plans
That retirement assets are shifting to DC Plans is well known. But what does this mean for retirees?
–Jason Roberts, MBA ’07

Institutional Investors and Their Managers
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Real Assets: Inflation Hedge or Inflated Asset?
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Investment Consultants: Gatekeepers to Institutional Investors
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An Interview with Jane Tisdale of State Street Global Advisors (SSgA)
–Interview by Ryan Randolph, MBA ’07
A Word from Faculty Advisors

*Boston College Financial*—a magazine written and managed by our graduate students—seeks to bridge the gaps between financial research and practice, provide a platform for our students to publish their work, and connect with the industry. Building on the success of the first two issues, we are pleased to present the third issue of the magazine, focusing on pension funds and trends in institutional investment. The size of institutional investors and the policy issues around retirement savings globally make this topic important and timely not just to leaders at asset management firms, but to all participants in the capital markets, down to employees saving for retirement.

With guidance from the Carroll School of Management’s finance faculty—in particular, Alicia Munnell, a renowned expert in retirement—our students have produced thorough background articles and conducted insightful interviews that will inspire and inform the larger graduate-school population, as well as asset management industry practitioners. The magazine features student writers, articles, and interviews. Like its predecessors, this issue of *Boston College Financial* demonstrates a spirit of passion and learning about finance that will be both evident and contagious to its entire readership. *Boston College Financial* has an important impact on students’ careers, and enhances the reputation of our graduate programs in finance.

Hassan Tehranian, PhD
Griffith Family Millennium Chair
Professor & Chairperson, Finance Department

Alan Marcus, PhD
Professor, Finance Department
5 The Changing World of Institutional Investors
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Editorial Letter

Welcome to the third issue of Boston College Financial, the finance magazine written, edited, and managed by BC graduate students. In this issue, we focus on institutional investors and the current challenges and opportunities they and their investment managers face. It may be surprising to some that investment managers (and their investment processes) will not be covered in detail here. Instead, we provide a solid background on the different types of institutional investors, the issues that they face, and what this means for the providers of services to these institutions.

We decided to tackle this issue for several reasons. First, as students learn in their core investments class, institutional investors represent trillions of dollars in assets and are the main source of assets for the capital markets in most developed economies. Thus, it is very important for students, graduates, and current practitioners in the financial services industry to have an understanding of the changing needs of institutional investors. The trillions of dollars set aside for retirement also raise very important public policy issues. Of course, we hope to separate the future from the fads, and have some fun in the process.

To achieve these goals, we begin with a background article on the institutional investment industry and defined benefit (DB) pension plan management by Ryan Randolph. Jay Roberts then tells us about trends in defined contribution (DC) plans. Joe Dougherty and Gerald O’Shea also provide a detailed analysis of the recently passed Pension Protection Act.

To help round out our views of the different types of institutional plans, Will Channel interviewed the chief investment officer of Colorado’s public pension plan. Ryan McCarthy adds to our understanding with an article on investment consultants.

We then turn our focus to brief views on new solutions and products entering the institutional marketplace. These include articles on liability-driven investing and portable alpha by Joe Dougherty, as well as an overview of two “real asset” categories, real estate and TIPS, by Jose Roberto Magana and Alex Dyson, respectively. Finally, for another view inside the industry, we talk with Jane Tisdale, head of State Street Global Advisors’ absolute return investment division.

We would like to express our sincere gratitude to our faculty advisor and the director of the Center for Retirement Research at Boston College, Alicia Munnell, and her colleague Steven Sass. And of course, as always, we are indebted to our graphic designer, Kul Thapa, who makes our ragged Word documents look so good.

Finally, we hope that you find this edition of Boston College Financial to be as educational and enjoyable as publishing it was for us. We would also like to invite you to write us with any comments, criticisms, and suggestions that you have at bcfinancial@bc.edu.

Sincerely,
The BC Financial Staff
Retiring baby boomers, demographic shifts, mark-to-market accounting, liability-driven investing (LDI), asset-liability matching (ALM), a reduced equity risk premium, portable alpha, absolute return, 130/30 strategies, hedge funds, alternative investments.

Some of the buzz has been around for a while. Some is only applicable in a particular market. The fact remains, though, that the concepts most widely adopted by institutional investors have a profound impact on trillions of dollars in assets—not to mention the fees associated with the management of those assets.

Beginning with this article, BC Financial will dissect the issues facing institutional investors—in particular, those in charge of retirement assets—and the actions that they and their consultants, asset managers, and asset managers’ brokers are taking in response to the changing landscape.
Why Focus on Retirement?

The words retirement and pensions make people think of old age and meticulous planning—not the sexiest words in investing—so why focus an MBA finance magazine on retirement? First, it is a very important social issue with huge political ramifications. Retirement is a public policy issue that encompasses questions on how the elderly are cared for through social security systems, occupational pension plans, and individual retirement savings. And because most developed nations are rapidly aging, how to pay for retirement is a massive concern.

Second, to paraphrase the bank robber Willie Sutton, retirement is where the money is! Currently, in the United States, retirement assets stand at about $12.3 trillion according to the 2005 Federal Reserve Flow of Funds Report. Figure 1 provides a breakdown of these assets. Endowment and foundation assets, the other main institutional asset category, are only roughly $600 billion. Conservatively, let us assume a 50 basis point fee on assets managed (indexed and traditional products have lower institutional fees, retail and alternative products have much higher fees). This pool of retirement assets represents over $70 billion in recurring revenues in the United States alone. It is not hard to imagine why asset managers, investment banks, and consultants are competing so vigorously to offer services and products to the retirement savings markets.

Globally, the OECD estimates assets funding pension and life insurance at nearly $25 trillion. After the United States, the United Kingdom ($2.5 trillion), Japan ($2.2 trillion), France ($1.1 trillion), and the Netherlands ($0.8 trillion) have the largest emerging retirement markets.

So managing retirement assets is big business, and the business of managing money is a profitable one. According to McKinsey, profit margins range from 15 to 40 percent, depending on the type and size of firm. And while the growth in assets from baby boomers will eventually move into an income protection phase in retirement, the industry is still in a growth mode.

Retirement Basics

Put rather crudely, before the 20th century, people kept working until they died. The rich could retire, so could those whose families could take care of them (often with the promise of inherited property or other belongings used to “pay” for “retirement”). But as the economy shifted from family farms to industrialized cities, incomes rose, children became less reliable retirement options, and other financial options became more reliable.

Today, retirement is a distinct and extended phase of life in all industrial nations and is funded, to varying degrees, on what are known as the three pillars of retirement:

- The first pillar is retirement income provided by the state. In the United States this is Social Security, which began in 1935.
- The second pillar is retirement income sponsored by the employer. These occupational pensions will be discussed in more detail below.
- The third pillar is retirement income provided by the individual.
through personal savings or, as in the case highlighted above, from family. The 401(k) or defined contribution plans combine the second and third pillars, as companies sponsor and contribute toward the plan and individuals add an element of personal savings discipline.

Some countries have a strong first pillar that goes a long way to fund all retirement needs. In the United States, Social Security is designed to provide a basic retirement income, which to many may appear very basic. The design of the retirement income system and how it is funded impacts governments, employees, and corporations. As a result, regardless of one’s perspective, retirement planning is a huge personal and public policy issue, which is why Social Security reform has earned the moniker of the “third rail of American politics.”

An essential question for societies, especially in more developed nations, is how to balance the three pillars to pay for the growing bill that is retirement. This is all coming to a head as people live longer, health care costs skyrocket, and families shrink (the population will be older with less younger people to support it). Furthermore, balancing these pillars becomes increasingly difficult with fewer contributors. The developed and developing countries of the world face an aging workforce. Figure 3 is the often-cited chart illustrating the proportion of the population that will be above the age of 60 in the year 2050 compared to today.

Some of the many, often unpalatable solutions to this looming crisis include: work longer, contribute more, shift the responsibilities into the future, expect less, and save more. These are a few of the most “popular” options.

While the sheer size of the retirement segment offers major opportunities to investment management firms and investment banks, it also comes with increasingly politically charged challenges. So much so—combined with increasing sophistication of institutional investors—that the profitability of the asset management industry will most likely decline (although it will remain high for some time).

Will History Repeat in the Asset Management Industry?

In 1974, Congress passed the Employee Retirement Income Security Act (ERISA). The regulations imposed by ERISA, combined with the bear market of 1972–1973 and—probably most importantly—the growing acceptance of the tenets of Modern Portfolio Theory (MPT), ushered in a sea change in the investment management industry.

Before these events, pension funds were managed conservatively, with the bulk of assets managed in one lump sum by a bank trust department or insurance company, with the “balanced” manager selecting the allocation of assets. The process of managing money was unsophisticated and the results unspectacular. After ERISA, pension funds, advised by a group of investment consultants, took the responsibilities for asset allocation and manager selection in-house. Many institutional investors began to seek out specialist managers for specific mandates, and the risk-adjusted returns of these managers were measured against appropriate benchmarks.

During the past 25 years, pension funds embraced international investing and the “six pack” of U.S. equity style and market-cap combinations (large-cap growth, mid-cap growth, small-cap growth, large-cap value, mid-cap value, small-cap value). Indexation and quantitative investing came into vogue. Consequently, the number of mandates and managers has also grown, as pension funds in the United States currently use an average of 18 different managers, while the larger pension funds use about 35 to 40.  

At the same time, the share of assets managed by banks and insurance companies declined as the share managed by investment counselors—pure asset managers who could meet the changing demands of the institutional marketplace—increased.

This transformation should continue to resonate with asset managers, and with MBA students beginning their careers as they look at the current changing landscape for opportunities.

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Institutional investors are an important force in the capital markets of developed countries today. In the 1950s, 91 percent of U.S. equity shares were held directly by individuals, and today, nearly 70 percent of U.S. shares are held by institutional investors—most are held by the largest 100 money managers. This shift has implications for investment performance and the structure of the investment management industry. This article lays out who these institutional investors are, which asset managers manage the money, how a pension fund works, and why that may be changing.

For those in the industry, some of this will be review. For those new to the industry or those who want to enter the industry, knowing institutional investors—and the challenges they face—is important. These are the largest investors in the capital markets.

Who Are These Institutional Investors?

As a brief background, the investing landscape is usually divided between smaller retail investors and larger institutional investors. Retail investors are individuals with checking and savings accounts, and investments in stocks, bonds, and mutual funds in either taxable accounts or tax-exempt retirement accounts such as 401(k) plans, IRAs, insurance, pensions, etc. According to the Federal Reserve, U.S. households had over $38.5 trillion in total financial assets at the end of 2005—over one-third of this in retirement assets.

Institutional investors include corporate pension plans, public pension plans, endowments, foundations, insurance companies, and banks. Just to make matters murkier, mutual funds are also institutional investors themselves, but they also offer asset management services to the retail and institutional investors listed above. To help get a flavor for the type and size of institutional funds at the large end, Figure 1 illustrates the top U.S. institutional investors and their assets.

Of course, these giant institutions are not exclusive to the United States. From the Netherlands (ABP) to Korea (National Pension Fund), to Singapore (Central Provident Fund), to Taiwan (Postal Savings Fund), to South Africa (Government Employees), to Canada (Ontario Teachers), many countries have large institutions with assets that would fit within or top the list of large U.S. institutional investors.

Types of Retirement Funds

As you can see, retirement funds dominate the list of large institutional investors, so it is important to know about different types of retirement plans before looking at how the money is managed and who is managing it.

There are two major types of retirement plans: defined benefit plans (DB) and defined contribution plans (DC), and some hybrid plans that combine elements of both.


Fundamentally, a pension is income a person most often receives in retirement—usually in the form of an annuity-like payment. A DB plan—known as a final salary plan in the U.K.—is a very common type of pension plan. In general, the pension benefit of an employee is defined by an employer, usually based on age, years of service, and final salary levels (or an average of salary levels).

The modern pension plan did not emerge until the middle of the last century. In the post-WW II era, as the demand for their products was rising, industrial companies were competing for a limited supply of skilled labor and saw pensions as a way to attract workers without having to raise wages—in essence, delaying the costs of labor. In the 1950s, Ford and General Motors began funding defined benefit pension plans for rank-and-file employees. At a time when the stock market was not as readily accessible to all as it is today, plan sponsors believed they could hire investment experts to provide returns sufficient to cover the employees’ anticipated benefits. Owning the employees’ retirement plans also kept unions on the
sidelines. According to the Money Market Directory, General Motors Asset Management (GMAM) currently uses about 75 outside asset managers to implement its investment strategy. The company even offers pension fund management services to other companies. Unfortunately, GM’s pension obligations dwarf the current market capitalization of the company itself. The issues with GM and its legacy obligations today are well documented. In fact, Bill Gross at PIMCO (which counts GM as a client) has also written about GM’s pension problems as a microcosm of America’s looming pension crisis.

For employers, DB plans provide a benefit to keep loyal employees—but the cost to offering this benefit is high, especially as work forces age. New companies often do not offer DB plans and the media is full of stories of older companies freezing or terminating their DB plans. For employees, the benefits of a DB plan are professional management and guaranteed income throughout retirement (i.e., the insurance aspects of not having to worry about savings if you live to be 70 or 100), but the plans are not portable and rely heavily on the stability of a company. This is a very real concern as several bankrupt steel and airline companies have shown recently. In fact, the closure of the Studebaker Automobile Company in 1963 and the forfeiture of its pension obligations set the scene for Congress passing in 1974 the Employee Retirement Income Security Act (ERISA), which governs corporations, unions, or governments, known as plan sponsors, use insurance premiums to the PBGC, and with an insurance system in place a moral hazard arises: Will weak sponsors be more willing to take on equity risk to help them close a funding gap rather than contributing more funds (which an underfunded plan often does not have)? It is an important question, because a failure of the PBGC could require a taxpayer bailout similar to that required during the savings and loan crisis of the 1980s. In fact, given the spate of recent bankruptcies, pension legislation passed in the summer of 2006 has sought to increase PBGC premiums and tighten funding regulations.

The other key type of employer-sponsored retirement plan is a DC plan. In the U.S. these plans are also known by the “40 act” tax code that gave rise to 401(k) plans (DC plans for corporations) and 403(b) plans (DC plans for nonprofit and educational institutions), while 457 plans are DC plans for public employees. In a DC plan, the employee defines his or her contribution toward retirement, with companies usually matching some of the contribution. The plans are portable between employers and are taxed favorably. In a DC plan the investment risk and burden of saving toward retirement are shifted from the employer to the employee—which has huge ramifications. The Boston College Center for Retirement Research (http://www.bc.edu/centers/crr/) has done extensive research on retirement savings and trends. The center’s research suggests that many Americans will not have the income to maintain their preretirement standard of living during retirement.

Many types of hybrid plans combine elements of DB and DC plans, and they have been much in the news recently. One type of hybrid is the cash balance plan, which has the individual account aspects of a DC plan (portable, savings level defined by employee), but the plan sponsor (employer) makes contributions and guarantees a return. Cash balance plans have been under scrutiny because of the different methods that can be used to move from a DB plan to a cash balance plan and its impact on older workers.

A cash balance plan is also similar to another type of retirement plan known as a superannuation scheme (or superannuation plan, for us Americans), which is common in Australia. In a superannuation plan, employees contribute (again, in a personal, portable, tax-advantaged account) to a superannuation fund professionally managed by a company, government authority, or industry (union) association with the goal of creating a large cash balance to fund retirement.

What Do Institutional Investors DO?

We will skip over a lot of the details here of Finance and Investments 101 and modern portfolio theory, but investors, institutional and otherwise, have a goal or obligation that they need to reach or meet.

Actuarial Assumptions

Corporations, unions, or governments, known as plan sponsors, use detailed actuarial assumptions to calculate their expected future pension liabilities and put aside assets (either from earnings or taxes) to meet these expected obligations in a plan. Actuaries use mortality tables to determine expected plan liabilities, which may seem a bit morbid, mathematical, and boring, but it is the foundation of pension savings. The expected obligations of the plan are discounted back to the present using a discount rate similar to the rate on long-term

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bonds. Plans must contribute or invest to match their obligations. As this discount rate drops, the obligation rises, and vice versa. A host of actuarial firms helps plan sponsors calculate their required contributions. In general, pension liabilities tend to extend out far into the future, say 15 to 50-plus years, although this is shortening as many workers age and companies have stopped offering DB plans to younger workers. Lower pension contributions can mean higher earnings per share, so the incentives of management and employees/retirees may not always be immediately aligned when it comes to pensions.

**Asset Allocation**

After plan sponsors determine their liabilities, they allocate assets in combinations of cash, bonds, stocks, and alternative investments, hoping that the returns of those investments outpace the growth of liabilities. One of the key tenets of portfolio theory is that diversifying assets allows investors to generate higher returns with less risk.

Many pension plans, with their consultants, have developed asset allocation strategies aimed at achieving high total returns. The focus has been on asset rather than liability performance. As can be seen in Figure 2, many large U.S. (and U.K. and Canadian) pension plans have high allocations to equities of all types.

With allocations to each broad asset class chosen, a plan sponsor allocates among different strategies within an asset class. Each strategy within an asset class usually has different risk and return characteristics that make it worthwhile to separate.

- In U.S. equities, plan sponsors engage in strategies that focus on equities by capitalization (large, small, mid, SMID) or investing style (value or growth).
- International equity allocations are still managed as one core mandate at most funds, but some large plan sponsors are applying style and market cap distinctions, while others will have dedicated emerging markets or, to a lesser extent, country-specific strategies in place.
- At most plan sponsors, fixed-income managers focus on total fixed-income return, but some larger plan sponsors have dedicated allocations and managers for high-yield mandates, core investment-grade mandates, and global or international bond mandates.
- Within private equity, plans allocate among venture capital (early and late stage), distressed situations, mezzanine financing, oil and gas partnerships, and buyouts (some even distinguish between mid-market and large buyout funds).
- Within hedge funds or absolute return strategies, managers may use several different strategy brackets with different characteristics, such as market neutral, event driven, arbitrage, and global macro, among others.

**Internal or External Management**

Plans implement their strategy by directly investing in securities and internally managing the assets or by outsourcing to an asset manager. The investment process has become rather complex as the number of products in the market has grown. As a result, most U.S. pension funds hire outside investment managers. If assets are managed in-house, large chunks are managed passively or in fixed income. In contrast, in Europe, only one-third of pension assets are managed externally.

**Active, Index, or... Closet Index?**

Another major choice that plan sponsors have to make is whether they wish to engage in active management or passive management. The academic literature on efficient markets, known in some circles as the active vs. passive management debate, is overwhelming. Research from the academic community suggests passive management is a better option after fees over the long term. Only a handful of investors, including Warren Buffet, John Neff, Peter Lynch, and Bill Miller, among others, have been able to beat the domestic U.S. equity markets over long periods of time (Bill Miller’s 15-year winning streak at Legg Mason came to an end this past year).
Nonetheless, a multibillion-dollar active fund management industry exists. Why? Outside of retail investing, many plan sponsors with the help of their consultants (who advise many other clients) believe that they can select a combination of active managers who will generate alpha across their portfolios to help meet or beat their required rate of return. And it has mostly worked.

For those who don’t succeed, the resulting hiring and firing of asset managers, in effect, transfers value from plan sponsors to the investment management industry. Many times it is necessary, but switching costs (of firing a manager, liquidating a portfolio, placing funds in cash, hiring a new manager, and buying into new positions) are high for pension funds and drag down returns. Switching gives many investment management firms the opportunity to win new business and consultants the opportunity to conduct searches. The frequency of hiring and firing has created a whole new business line, offered by brokerage firms, custody banks, passive managers, and consultants, called transition management, which is designed to lower these costs by crossing trades internally with other clients also shifting around funds.

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The Pension Fund Timeline

Below is a brief history of pensions in the developed world:

- Some of the first (organized) pensions were set up in the late 1600s in Britain for the Royal Navy.
- On this side of the pond, the U.S. experimented with pensions for soldiers around the time of the Revolutionary War and more explicitly during the Civil War.
- In 1875, American Express set up what is recognized as the first U.S. corporate pension plan. Notable companies that set up corporate pension plans before 1929 (and are still large institutional investors today) were U.S. Steel, GE, AT&T, and Kodak.¹
- In 1921, in both the U.S. and Britain, acts were passed granting some tax relief to companies offering pension plans that met basic criteria.
- According to the Employee Benefit Research Institute (EBRI), on the eve of the Great Depression, there were nearly 400 corporate pension plans in the U.S.² Early pension plans were often not funded by the corporation—making it difficult to make pension payments during tough times. Further, a pension was viewed as a benefit but not as a contractual obligation.
- During and after World War II, a variety of factors led to explosive growth in corporate pension funds. These factors included further tax incentives, a competitive labor market (and a wage freeze during the war), and a labor union focus on non-wage compensation.
- In 1947, the Taft-Hartley Act was passed providing guidelines for multi-employer, or union, pension funds.
- In 1950, the General Motors pension plan was created.
- In 1953, the Studebaker car company went bankrupt leaving thousands of workers without the pensions promised to them. The scandal brought about market-changing reforms.
- The 1974 Employee Retirement Income Security Act (ERISA) was passed. The act required that pension plans must be funded based on reasonable actuarial assumptions (no pay-as-you-go plans), and managed according to the Prudent Man Rule.³
- In 1978, IRS regulations were passed creating 401(k) plans which took off during the bull market of the 1980s.
- In 1991, Robert Maxwell, publisher of the Mirror newspaper, was found to have embezzled hundreds of millions from the company pension fund, prompting pension regulation in the U.K.
- In 1996, San Diego increased pension benefits leaving the city in financial crisis after the dot.com crash—prompting questions about the solvency of other public pension plans.
- In 2001, Enron declared bankruptcy leaving many Enron employees who were over invested in company stock with little retirement savings.
- In 2006, The Pension Act of 2006 was passed in the U.S. Congress creating stricter standards on DB plan funding and taking steps to further encourage 401(k) savings.

³ The Prudent Man Rule, first expressed by Massachusetts Supreme Court Justice Samuel Putnam in the 1830s, says that trustees of assets should “observe how men of prudence, discretion and intelligence manage their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income, as well as the probable safety of the capital to be invested.”
Compass Check: North, South, or LDI?

By Joseph Dougherty, MBA ’08

How Did We Get Here?

During the bull markets of the 1980s and 1990s, assets were the focus of pension finance, and equities were the answer. Plans could typically stick to their 60/40 equity/bond allocations and come out all smiles. But now, the low-rate environment has driven up plan liabilities at the same time that weak domestic equity markets have depressed asset returns, setting plan sponsors on a search for solutions to their underfunding woes. The search has led to an old answer—LDI, the popular monogram for liability-driven investing.
LDI means different things to different people. To some, LDI is an asset allocation reevaluation. For others, it is a benchmarking and volatility issue. The bottom line is that plan sponsors are taking a renewed focus on their plan’s funding status thanks to the U.S. government’s Pension Protection Act of 2006, requiring most plans to reach fully funded status within seven years, and FASB’s overhaul of rule 87 requiring companies to state the funded status—assets relative to liabilities—of their plans on the balance sheet and mark actual asset performance to market on the income statement. Similar changes are sure to follow from the Government Accounting Standards Board that regulates public pension plans. The bottom line: Plan liabilities are getting the spotlight.

In the U.K. and Europe, where pension legislation has already forced mark-to-market accounting treatment, asset–liability investing has enjoyed robust convergence and product development for some time. We in the U.S. are a little slow to catch on. Money managers and consultants with overseas offices have been designing solutions for their clients, and only recently have they modified their offerings and begun to bring them to U.S. soil. JP Morgan Asset Management, State Street Global Advisors (SSgA), Barclays Global Investors (BGI), BlackRock, Goldman Sachs, Northern Trust, SEI Investments, PIMCO, Hartford Investment Management, and UBS Global Asset Management are among the many to offer LDI-branded services in the U.S. BGI manages about $40 billion in such strategies, mostly in Europe. SSgA and BlackRock both manage about $20 billion, mostly in Europe.¹ Not just the big players, but anyone with fixed-income offerings, is getting into the action.

Plan sponsors and their consultants have dusted off their notebooks and begun to rethink the allocation framework: Is the 60/40 allocation split really relevant to plan liabilities? In the bull markets of recent history, plan sponsors aimed to maximize returns, but none really lost sleep over risk because excess returns were plentiful. Now, plans are taking a much more acute view of their risk exposure and benchmark selection. Is the S&P 500 or the Lehman Aggregate really relevant to a plan’s liabilities? Not really. What matters is the plan’s liability stream and how to outperform those liabilities. This, of course, is a tricky question.

Taking Stock

Pension liabilities are highly bond-like. The present value of the expected future benefit obligations moves with changes in long-term interest rates just as bonds do—when rates go down, prices go up. Owning long-term bonds is the purest hedge against this interest rate risk. During the double-digit-yielding days of U.S. treasuries in the 1980s, plans were shifting into long bonds—locking in these returns—and so “immunizing” against any precipitous fall in rates that would spike obligations.² While sponsors of some underfunded plans may feel pressure to shift assets from stocks to bonds these days to alleviate asset erosion, only equities can provide the returns needed to regain funded status. Meanwhile, investment managers are becoming more comfortable with porting alpha over their fixed-income allocations to enhance the upside potential. For mature or frozen plans with liability certainty, a cash-matching strategy makes sense, but not for younger plans. Going long in bonds is an expensive proposition in terms of real assets, and, with limited liquidity in the market, a spike in demand for these products will only depress rates and drive prices up.³

Where Are We Headed?
Currently, LDI has much to do with redefining the plan benchmark and eliminating unrewarded interest rate volatility.4 LDI makes the projected liabilities the benchmark for measuring and managing risk, rather than considering asset class performance on an absolute basis. As a result, plan actuaries must become involved to a much greater degree in the plan’s investment strategy. Actuarial forecasts underlie the entire process, and forecasting a plan’s liabilities 60 years into the future is no easy nor accurate task. LDI does not refer to a single product or product line, but rather a more intense look at what is driving the plan’s liabilities and how best to cover them. For a large part, consultants and money managers have begun marketing LDI solutions more as a customizable service than as a wholesale product. Customization is, of course, expensive.

This mismatch in duration exposes plans to unnecessary interest rate volatility, which is exactly what plan sponsors do not want. The boards of directors of pension plans impose limitations on the amount of risk that plan sponsors can take to achieve returns, where risk is defined as the tracking error relative to a benchmark. Since plan sponsors have a limited risk budget with which to make their investment allocations, taking on unnecessary volatility is both costly and inefficient. Plan sponsors are limiting the returns available per unit of risk. Previous streams of thought assumed that cash was a no-risk investment option. Upon looking closer, it becomes apparent that cash—with zero duration—leaves the plan even more exposed to a down shift in the interest rate curve than short duration bonds do. An LDI framework sets the plan’s liabilities as the riskless asset. By benchmarking against plan liabilities instead of an arbitrary bond index or cash, plan sponsors can remove this unnecessary interest rate exposure and enhance their available return set. (See Figure 2.) Working with plan actuaries, investment managers can develop various liability profiles using Monte Carlo simulations. Liability-driven benchmarks are nothing new, however. Generally, plans can create a Treasury strip benchmark using zero-coupon Treasuries to measure the general growth of liabilities, or use interest rate swaps on long-term, investment-grade corporate bonds to mimic the growth of liabilities. Ryan ALM, Inc., was among the first managers to introduce Treasury strip benchmarks in the 1980s and William Sharpe wrote about the concept in 1990. Money managers such as UBS and Mellon have introduced liability-based benchmarks over the past year.5

While an LDI framework does not necessarily mean shifting allocations into bonds, LDI does suggest structuring the fixed-income allocation more intelligently. In many cases plans have been paying for unrewarded risk by benchmarking against the Lehman Aggregate which is more heavily weighted on the short side of the duration curve, while plan liabilities are long dated. As of December 31, 2006, only 12 percent of the Lehman Agg’s components had durations greater than ten years, while roughly 88 percent had durations less than five, and 20 percent less than two.6 The bonds of most pension plans have durations out to about five years, while the typical plan’s duration goes beyond the ten-year mark. In other words, a 1 percent decline in the discount rate would cause a 10 percent increase in plan liabilities, but only a 5 percent rise in the plan’s bond values. (See Figure 1 for an illustration of a mismatch in duration.)

Plans adopting this LDI framework will free up risk in their overall risk budget with which to invest in equities or other overlay products. As the portfolio’s efficient frontier shifts upward, a new opportunity set is given with higher expected excess return per unit of risk. Plans can also go into long bonds to extend duration; however, they will remain exposed in the middle of the duration curve. As plans refocus on risk and adding alpha, how do they stop further asset drain?

Stopping Leaks:
Using Interest Rate Swaps to Manage Duration
Since long-dated bonds alone cannot exactly match liability cash flows, swaps offer a practical solution to hedge these liabilities.7 Zero-coupon inflation-linked swaps cover the full maturity profile.

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Plans using swaps can lock in today’s real rate and hedge against inflationary rises, although they forfeit the upside potential possible with real assets. With inflation swaps, plans make a fixed payment and receive an inflation-linked payment. At the same time, the swap counterparty needs to hedge exposure to future inflation by buying inflation-linked notes, which are, however, in short supply. Any large spike in their demand would drive rates down and prices up, making broad implementation self-defeating. A broad-based move has already occurred in the long-dated U.K. gilt market, helping to invert the U.K yield curve. In the U.S., investment experts feel that a sudden rush in demand for long-dated bonds would undoubtedly push down yields making the transactions costly, but that such an effect would not be as pronounced as overseas due to the depth of the U.S. bond market. Swaps are not cheap and they won’t close the funding gap, but they can reduce interest rate risk.

Synthetics offer solutions to interest rate risk at far more reasonable prices than in the past. While outright investment in swaps is a complicated process involving managing counterparty risk and collateral, some investment managers have developed pooled solutions whereby clients can gain access to the swap market by investing in swap pools. Here, the investment manager acts as an intermediary for the plan. State Street Global Advisors in Boston has developed such a product domestically. SSgA’s PALMS (Pooled Asset Liability Matching Solution) product enables plans to extend portfolio duration by giving clients the option to invest in a series of zero-coupon swap pools from today out to the year 2045. The pools come in five-year increments, and plans can choose to invest across all or into one or another particular pool. In turn, SSgA invests in swaps in each of the subset years. One concern that plans have is that investments in the PALMS product must be fully funded, i.e., clients must match their exposure coverage dollar for dollar, with SSgA investing the cash in an enhanced U.S. dollar three-month LIBOR strategy to cover the floating rate payment and hopefully provide a little extra alpha. Furthermore, the swaps are reset quarterly via the transfer of cash between the fund and counterparty to prevent a sizable profit/loss position from developing. The investment manager handles the legal, trading, and credit risk issues.

Unlike investing in actual bonds, swaps do not require up-front capital, although collateral and income-producing assets need to be on hand to meet swap payments. Duration is a word that gets a lot of air time, and while it does generally refer to the time to maturity, it has more mathematical roots in describing a position’s interest rate sensitivity. Given that bond valuations move inversely with interest rates, bonds with higher durations move inversely with greater magnitude. Of course, bonds with negative durations move directly with interest rates. Generally, the duration of an interest rate swap is the difference between the average durations of the long (receiving) position minus the short (paying) position. Without going into the details, it is safe to say that the duration of a floating rate bond is about the time to its next payment, and the duration of a fixed-rate bond is approximately its time to maturity. For example, a floating position that makes quarterly payments—none now and one in 0.25 years—has a duration of about 0.0125, while a one-year fixed position has a duration of about 0.75. To extend duration, a plan would want to build a position that moves inversely to interest rates, so it would want to build a positive duration swap. Going long the fixed rate and short the floating rate would provide the desired effect.

Synthetics offer solutions to interest rate risk at far more reasonable prices than in the past. While outright investment in swaps is a complicated process involving managing counterparty risk and collateral, some investment managers have developed pooled solutions whereby clients can gain access to the swap market by investing in swap pools. Here, the investment manager acts as an intermediary for the plan. State Street Global Advisors in Boston has developed such a product domestically. SSgA’s PALMS (Pooled Asset Liability Matching Solution) product enables plans to extend portfolio duration by giving clients the option to invest in a series of zero-coupon swap pools from today out to the year 2045. The pools come in five-year increments, and plans can choose to invest across all or into one or another particular pool. In turn, SSgA invests in swaps in each of the subset years. One concern that plans have is that investments in the PALMS product must be fully funded, i.e., clients must match their exposure coverage dollar for dollar, with SSgA investing the cash in an enhanced U.S. dollar three-month LIBOR strategy to cover the floating rate payment and hopefully provide a little extra alpha. Furthermore, the swaps are reset quarterly via the transfer of cash between the fund and counterparty to prevent a sizable profit/loss position from developing. The investment manager handles the legal, trading, and credit risk issues. Other managers, such as BGI, are developing similar products, but are designing them to invest the cash in an absolute return strategy instead of enhanced cash. Some plans are hesitant to tie up cash in an LDI investment for fear


9 Don Chance, Analysis of Derivatives for the CFA® Program, CFA Institute (August 2003).

that they are sacrificing greater return opportunities. As a result, investment managers in the U.K. and the U.S. have begun to design leveraged versions of such products where the cash commitment is not required. It all depends on how much risk plans are willing to take on—and pay for, of course. Figure 3 illustrates how a pension fund may use an investment manager to implement an asset–liability matching strategy using derivatives.

Smooth Sailing?

All this talk of swaps and derivatives and volatility may worry some plan sponsors concerned with meeting their ERISA requirements as fiduciaries to act in the best interest of participants and beneficiaries. Some plan sponsors worry that their pursuit of such a strategy could be interpreted as an effort to cover their tracks since deficits will soon be front and center on the balance sheet. The Department of Labor issued a letter this past October to J.P. Morgan Chase, for broader market dissemination, saying, in effect, that plan sponsors would not violate their fiduciary duties by implementing a strategy that focuses on plan liabilities and attempts to reduce volatility in funding requirements. However, plan fiduciaries were cautioned that any benefits to the employer as a result of such a strategy should be incremental at best.11

Some companies have already taken the leap. In August, Lucent Technologies began to shift its $34 billion DB plan into a 50/50 equity/bond structure from a 75/25 split in an attempt to align its assets to its liabilities. International Paper already invests about 25 percent of its $7 billion DB plan in interest rate swaps used to extend portfolio duration and plans to up the allocation to 50 percent over the next two years.12 The Stamford-based company already uses a swap-based benchmark. The $10 billion World Bank pension fund also uses a swap-based benchmark to evaluate asset performance.13 Because interest rates have risen and are not expected to rise much higher in the near future, more plans may be considering locking in rates and funding levels. Remember, as rates rise, liabilities fall. Corporate plans have been quicker on the uptake as their treasury and pension offices are more integrated than those of public plans, whose pension and treasury functions are often quite separate. Atlanta-based investment consultant Watson Wyatt has been advocating LDI strategies for some time now. While a lot of interest in the strategy exists, few plans are actually at the implementation stage. A 2005 survey of more than 2,000 plan sponsors conducted by Greenwich Associates of Greenwich, Connecticut, showed that only 16 percent of corporate plans would consider implementing an asset–liability matching strategy, while 3 percent had already done so, and 12 percent were planning to implement one.14 While these numbers are relatively small, and plans will undoubtedly have to pony up funds to get their plans above water, the risk-mitigating factors of an LDI strategy will most assuredly have their place in a growing number of retirement schemes.

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14 Vince Calio, August 21, 2006.
New Pension Law Brings Broad Reform

By Joe Dougherty, MBA ’08, and Gerry O’Shea, MBA ’07

Not since the Employee Retirement Income Security Act (ERISA) of 1974 has the retirement savings community seen such major reform as with the passing of the Pension Protection Act this past summer. This legislation and the Financial Accounting Standards Board’s (FASB) recent overhaul of rule 87, which had previously governed corporate pension accounting, makes reform a hard reality.

The original ERISA rules and accompanying accounting standards followed traditional actuarial norms, spreading the pension costs over successive generations. Never once did it matter if, in any given year, the value of plan assets was less than the present value of liabilities. As crazy as that sounds in hindsight, plans were considered to last forever, and the impact of unexpected events was spread out over a period sometimes as high as 15 to 30 years. A Department of Labor study done at the time of the original ERISA legislation showed that although plan terminations were not as uncommon as once thought, plan participants retained a majority of their accrued benefits. Following this logic, the insurance premiums collected from plan sponsors by the Pension Benefit Guaranty Corporation (PBGC) created from ERISA could fill in the gaps where needed.

The idea of pension plans as perpetual is a thing of the past. Solvency in the short run rather than equity among generations of participants is the mind-set throughout the new legislation. The act requires plan sponsors both to fund the present value of benefits accrued in the present year and to fund any shortfall of accrued benefits within 7 years—down from 30 years (airlines are given special leniency). According to White House officials, the extended time for the airline industry to comply was granted to assuage concerns that current financial hardships within the industry could overwhelm these companies in the short term. Stephen McMillin, deputy director of the Office of Management and Budget, told the Wall Street Journal, “You have to have a balance. If you push some of these companies too hard too fast you’re going to be pushing them into a situation where, instead of protecting the worker from the theoretical risk 10 or 20 years down the line, you’ve created an actual harm to them in the first few years.” For multi-employer or Taft-Hartley plans—those plans that cover employees that are generally part of collective-bargaining agreements—outstanding liabilities will now have to be amortized over 15 years. Prior to enactment of this legislation, federal law granted businesses up to 30 years to pay back these unfunded liabilities. Multi-employer plans would also be prohibited from increasing benefits if the increase would result in plan funding falling below 65 percent.

The act aims to remove the burden placed on the PBGC, which currently has a $23 billion deficit, to rescue failing pension plans. The burden is now placed on the plan sponsors. However, this

1 Deborah Solomon, “Pension Measure to Enact Changes Over Several Years,” Wall Street Journal, August 5, 2006.
burden could induce some plans in poor financial condition to increase the risk of their investments if sponsors are unwilling or unable to contribute more funds. If this added risk fails to generate the returns expected, the PBGC could find itself on the hook for even more. Specifically, concerns exist about the precedent that Congress has set by allowing certain industries more time than other industries to fund their pensions. David John of the Heritage Foundation, a conservative Washington-based think tank, recently wrote that these provisions would “open a huge loophole that politically connected industries could use to underfund their pensions. Why should auto parts companies, and even auto manufacturers themselves, spend billions of dollars to better fund their pensions if airlines don’t have to do so?”

Under U.S. Generally Accepted Accounting Principles (GAAP), the projected benefit obligation (PBO) is the present value of the benefits the employer expects to pay retirees based on years of service to date and expected future salary at retirement, as adjusted by various actuarial assumptions, including average retirement age, mortality rates after retirement, and number of employees staying to retirement, among others. The funded status of the plan is the fair value of plan assets less the PBO; however, under Financial Accounting Standard 87, the funded status was not the amount recorded on the balance sheet—as that would result in balance sheet volatility as asset values fluctuate. Rather, U.S. GAAP had required that various adjustments or “smoothing” devices be used to limit such volatility. After these adjustments were taken into consideration, a prepaid pension asset was then recorded within the “other assets and liabilities” footnote of the balance sheet. The effect of pension solvency had been even more obscure on the income statement, as one of the adjustments to pension expense was to include the expected return on plan assets, which was always positive and quite often overly optimistic. Such adjustments have often turned a pension expense into a pension gain. All that is gone.

On September 30, 2006, FASB issued Rule 158. The new rule requires plan sponsors to disclose the plan’s funded status on the balance sheet and to record changes in the funded status on the income statement as they occur. The new rule applies to plan sponsors of public and private companies and non-government not-for-profits. For publicly traded companies, the new rule has already become effective for plans with fiscal years ending after December 15, 2006. Other plans are responsible to comply for fiscal years ending after December 15, 2008. The new rule requires plan sponsors to disclose the plan’s funded status as of the end of the sponsor’s fiscal year end becomes effective with fiscal years ending after December 15, 2008.

The new legislation takes two critical assumptions—discount rates and mortality rates—out of plan sponsors’ hands and puts them into law. Although the mortality rate changes are only minor, the changes in discount rate assumptions are significant. Previously, a single four-year average of the long-term investment-grade corporate bond rate had been used to discount pension liabilities. With the new reform, plan sponsors are mandated to discount pension liabilities using a set of three different two-year average rates of long-term corporates to match liability durations of 0 to 5 years, 5 to 15 years, and 15 plus years.

Asset valuations are also affected by the new legislation. Previously, plan assets were valued using a five-year average of actuarial valuations, which could be between 80 percent and 120 percent of the market valuation of assets. Under the new rules, plans must mark assets to market using a two-year average of valuations, and valuations cannot exceed 105 percent of the current market value of assets. Furthermore, companies will no longer be able to count the credit balance from historical excess contributions unless their funding status exceeds 80 percent. To offset this, however, the tax deductible amount of contributions has been raised from 100 percent of current liabilities to 150 percent for 2007. With these reforms, the push away from DB plans and toward DC plans has been affirmed for better or worse.

Not only does the Pension Protection Act have a significant impact on the DB market, but it also significantly affects the defined contribution space. The legislation favors automatic enrollment of employees into 401(k) plans by shielding plan sponsors from the liability of participants’ poor investment decisions. Protection applies as long as plan sponsors notify employees of the right to opt out and the auto-investment follows the Department of Labor’s guidelines for prudent investments. Most notably, the DOL recommends investing in age-based or target-date funds that rebalance between stocks and bonds as the employee approaches expected retirement. Not only does the act offer protection from liability to plan sponsors, but also to financial advisors who advise participants through an eligible investment advice agreement. Under such an agreement, the advisor becomes subject to SEC regulation as a plan fiduciary. In soliciting financial advisors, however, plan sponsors continue to be held to the same ERISA fiduciary standards of skill and prudence that apply to their other responsibilities.

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With its push toward DC plans outright and as a result of the DB reforms, the Pension Protection Act has shifted the risk of retirement investing from the plan sponsor to the participant. Between 1983 and 2004, the percent of workers covered by DB plans only has shrunk from 62 to 20, while participation in DC plans only has risen from 12 percent to 63 percent. As this responsibility goes from the hands of the sponsor to the participant, the economy of scale in the investing process is lost and becomes inherently less efficient. The diversification and hedging tools available to the large pools of money in DB plans are not available to individual accounts. And unlike DB plans, whose benefits last until death and sometimes to the survivor beneficiary’s death, 401(k) investments can offer no such guarantee that the benefits will last. After retirement, all fiduciary responsibility falls on the individual. Statistics show that over 90 percent of participants opt for a lump sum cash payment at retirement. Recognizing this inefficiency, investment and insurance companies are designing annuity products for plans that could provide lifetime and survivor benefits to participants based on their 401(k) balance at retirement. As the trend to DC plans continues, plan participants are being asked to take on a much greater role in retirement planning. Are we up to it?

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Gerry O’Shea is a 2007 MBA candidate at Boston College. Prior to BC, he spent nearly six years as a Congressional staffer in Washington, D.C. Most recently, Gerry served as the legislative director for a U.S. Representative on the House Financial Services Committee. Gerry graduated from James Madison University with a BA in political science, and is looking to transition to a career in asset management. He can be contacted at osheaga@bc.edu.

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The Pension Fund World Changes

As plan sponsors hire a variety of investment managers, it is important that the managers be closely monitored for style drift. Each manager is hired to invest along specific guidelines and to a specific benchmark. If managers stray from those guidelines, the plan risks losing the risk-mitigating diversification for which it’s paying. Furthermore, as a manager’s correlation to its benchmark approaches one, the manager is essentially investing in the benchmark but charging active management fees—not a good deal for the plan.

In the bull markets of the 1980s and 1990s, the traditional way of running a pension fund worked well; high equity returns justified high equity allocations and lowered corporate and government contributions to plans. However, the crash of domestic equities and interest rates caused plan assets to plummet at the same time that projected liabilities surged. As legislation requiring companies to show these pension deficits on their balance sheets and income statements proceeds, plans have begun to reevaluate their allocation process and its relevance to liabilities.

Many plans are beginning to acknowledge that exposure to the market—beta—can be achieved through a passive manager at low costs, and that true excess returns—alpha—remain in the realm of alternative investments and emerging markets. However, with higher expected returns comes higher risk. The separation of alpha and beta has led to the prolific development of derivatives strategies all aimed at garnering excess returns while mitigating risks. As plans become evermore cost conscious, they are becoming choosier with their investment dollars. They want above-market returns at a fair price without undue risk—and nothing less.

The DB pension plan may be a topic for history books in 100 years as the cost to administer it continues to rise. Investment managers and consultants are well aware of the anticipated shift to DC plans and IRAs and are developing new products to capture those investment dollars. Whether or not individuals can manage their money as effectively as professionals is a topic of tremendous debate.

Ryan Randolph is a second-year MBA student at the BC Carroll School. Upon graduating from Colgate, Ryan worked at Greenwich Associates for 8 years in the investment management practice. Ryan is pursuing a career in the investment management industry. He can be reached for comment at ryan.randolph.1@bc.edu.
Jennifer Paquette, CIO, Colorado Public Employees Retirement Association

Interview by William Channell, MBA ’07

Jennifer Paquette is the chief investment officer of the $36 billion Colorado Public Employees Retirement Association (PERA). Colorado PERA is the twenty-third largest public pension fund in the United States, and in 2005, the fund returned 9.8 percent against a public fund universe mean of 7.5 percent. Ms. Paquette was kind enough to sit down with BC Financial to discuss trends in institutional fund management from a public pension fund viewpoint.

Prior to her position at Colorado PERA, Ms. Paquette held positions at Merrill Lynch, Alliance Capital, and Mitchell Hutchins/Paine Webber. She holds an MS from the London School of Economics and a BA from Boston College.
BCF: What are the key trends you are seeing in institutional investment management?

JP: Well, this will be nothing you have not heard before, but the key trends include the closing of many corporate DB plans and the increase in DC plans—both in the public and private arena.

In addition, there is talk of movement into a lower investment return environment and, of course, (given returns in the early part of the decade) lower funding levels.

So the ever-present challenge is how to optimize our investments to best support our liabilities. With this in mind, we are embracing risk where we feel we will be compensated for it.

We manage a lot of our assets in-house, so attracting and retaining investment talent can be a challenge. So far, we have done well, but as a public pension fund, it can be a challenge.

BCF: What is your rate of return goal, and how are you planning to meet it?

JP: Our rate of return goal is 8.5 percent, which some consider high, especially compared to other public pension funds, where the average is closer to 8 percent. The asset allocation we have set to meet this goal is on our website. (See Figure 1.)

Some consider our target to be aggressive, but it is higher for two important reasons. First, we have mature programs in private equity and real estate, which are important parts of our portfolio. Alternative investments are 8 percent of the portfolio, and real estate/timber are 7.1 percent of the portfolio. More importantly, working with our actuary, we have a view of inflation at about 3.75 percent over the long term. This is higher than the inflation estimates of some other pension funds, and it pushes up the return assumption we have set for ourselves.

BCF: How do you structure your domestic equity portfolio?

JP: We currently manage 60 percent of our domestic equity portfolio passively and 40 percent actively. Within that we have some “core” or what others think of as “all cap” managers, we have some managers focused on specific capitalizations (large cap, mid cap, small cap). We are also utilizing some quant strategies.

We have had a few concentrated portfolios, but we do not view them as attractive. The more concentrated they are, the more risk they have—so being comfortable with that risk is dependent on your confidence in the manager’s skill.

In terms of “unconstrained benchmark” portfolios, we do not currently have any, but we are open-minded about them. Our investment consultant, Ennis Knupp, has presented them to us, and they provide another way to open up the investment opportunity set to the manager.

We are also open to global portfolios for the same reason. Currently, we still allocate assets to domestic equity and international equity managers. But with global portfolios, the manager has a wider opportunity set.

BCF: How do you invest in alternative investments?

JP: Currently, we do not invest in hedge funds. We reviewed hedge fund investing with our Board of Trustees three years ago, and decided not to pursue hedge funds. At this time, we are comfortable with that decision.

BCF: So you obviously would not be impacted by it, but do you have a view on the riskiness of hedge funds, particularly in light of the Amaranth and other hedge fund blowups?

JP: It is difficult to say. I think it is too soon to tell if what happened at Amaranth is an isolated event or a more general indication of what’s to come in the hedge fund space. We’ll have to see how things pan out in that area before we can really tell.

BCF: How about your private equity investments?

JP: In our private equity program, we invest in large buyout funds, mid-size buyout funds, special situations funds—such as distressed debt—and venture capital. We generally invest as a limited partner (LP) with a general partner (GP).

BCF: And your real estate investments?

JP: As I mentioned, our real estate program is very mature, and we mostly invest in real estate partnerships. Although we do have a small portion invested directly in real estate assets when our real estate advisor presents us with good opportunities.

BCF: Do you use fund-of-funds to make investments in alternatives?

JP: We do have some fund-of-funds, but we mostly avoid them. We feel we have the in-house capabilities to select the best funds and partnerships, and avoid the additional fee layer associated with fund-of-funds.

BCF: Are you finding requirements that public pension funds disclose information about private LP investments to be an issue?

JP: It is an issue the industry is facing. However, there is currently a statute in Colorado that allows PERA to keep some information on LP investments private—at least until the funds are completely wrapped up. But we do disclose some information on our website on
the funds we invest in, how much and when, among other things.

Some GPs are sensitive to the release of certain portfolio information and, in some cases, we feel it can impact the performance of the funds we are in. So while I am glad Colorado protects the confidentiality of some information, we also have to monitor if we want to be an LP with other LPs who do not have the protections we do. It can be a big issue.

BCF: Can you tell us your thoughts on two other “buzzwords” out there in the investment community: portable alpha and commodities?

JP: Right now, we are not doing portable alpha, but it is something we are researching actively. We will need to see how it will fit in with our current strategies and allocations.

We have not done anything new with commodities for a long time. You will notice that we do have a 1 percent allocation to timber—which we have a long history with.

BCF: What are your thoughts on liability-driven investments?

JP: Liability-driven investing is a very important development. It is popular on the conference circuit right now, but we really began looking at this in 2001. Every pension plan reviews their liabilities in the actuarial environment, but we also started looking at them in the economic environment. When this is done, a plan can get much more direction on the asset allocation that will support the liabilities of the plan.

BCF: Speaking of liabilities, there is a lot of talk of the public pension system crisis. What are your views on this, and how is Colorado PERA positioned to meet its obligations?

JP: I’ll have to tread carefully on this one—it is a difficult question because I don’t know all of the details surrounding public pension funds in other states. Are we in a crisis? I don’t think so. What I can address is where we stand here at Colorado PERA. Basically, our funding ratio has declined due to investment performance in the early 2000s and because of some small increases to benefits. In 2006, the governor, treasurer, and PERA developed an agreement, which is now law, to increase contributions over time (which will help ensure obligations are funded). As I mentioned, it is tough to address how much other public pension plans are underfunded because of investment performance or benefit increases, but I am proud that Colorado has taken the steps that it has to ensure its funding levels.

BCF: I know you are busy, so I wanted to let you go, and thank you very much for your time.

JP: Thank you. I look forward to seeing the new issue of the magazine.

William Channell is a Boston College MBA 2007 candidate. Prior to seeking his MBA, Will attended Penn State. This summer he worked at Deutsche Bank in real estate. He can be reached for comment at channell@bc.edu.
Editor’s Note:
Institutional investors are turning to a variety of investments lumped together as “real assets.” These investments are thought to offer respectable returns, good protection from inflation, and low correlations to equities. Of course, as institutional investors have plowed into many of these asset classes, the usual questions of overvaluation, reduced inefficiencies (and therefore returns), and limited access arise.

Examples of real assets are real estate, Treasury Inflation Protected Securities (TIPS), timberland, and commodities. While BC Financial could (and may) dedicate a whole issue to each real asset, we thought we’d provide a summary of selected types of real assets here. And we invited two fearless first-year MBA students to contribute to this effort. First, Alex Dyson writes about real estate, followed by Jose Roberto Magana who introduces us to TIPS.
Real Estate: Real Asset and Real Returns
By Alexander Dyson, MBA/MSF ’08

Real estate, on the whole, represents the largest asset class in the investment world, and is a growing piece of institutional investment portfolios. Investors can gain exposure to the commercial real estate market in two ways: direct investment and indirect investment. Real estate investment trusts (REITs), real estate-related exchange-traded funds (ETFs), mutual funds, and commercial mortgage-backed securities (CMBS) are examples of indirect investment. This article will focus on the issues related to direct investments in the context of overall asset allocation strategy. The different real estate investment strategies (core, value-added/core-plus, and opportunistic) and types of properties (apartments, retail, office, industrial, and hotels) are also interesting areas of exploration, but outside the scope of this article.

As of June 30, 2006, the 100 largest holders of non-REIT (direct) real estate assets managed $620 billion in this sector, up over 20 percent from the previous year. This coincided with returns of 20 percent during 2005, according to data from the National Council of Real Estate Investment Fiduciaries (NCREIF)—very enticing results. This performance does not fit the long-term trend, however, nor does it represent what is expected in the future. But real estate has become an important piece of an institutional asset allocation for its diversification and inflation benefits, as well as expected return.

Measuring Returns and Risk in an Inefficient Market
Real assets raise issues with the measurement and management of these investments in the context of a larger, mixed-asset portfolio. Real estate assets exhibit high transaction and management costs and low liquidity, in addition to being a highly fragmented market due to product heterogeneity and the influence of regional economic factors.

In reaction to this, the MIT Center for Real Estate has developed a transactions-based index (TBI), extrapolating more accurate returns using econometric techniques based on known transactions and the appraisal data. This type of index can be susceptible to large volatility, however, and available data go back only as far as 1994, making it less useful for long-term analysis. For comparison, the MIT data for the same 15-year period shows an annualized return of 10.66 percent and standard deviation of 7.29 percent. Another problem with both of these indices is that, because they are based on privately owned properties, they are not investable, thus making them questionable benchmarks for institutional investors.

These data quality issues affect the portfolio allocation decision and reduce the effectiveness of many optimization models that include real estate investments. The understated risk leads to overstated diversification benefits and excess allocations to real estate. “Given the limited history of data on alternatives, plan sponsors don’t have the same confidence in the expected returns, variances, and covariances generated by the optimizer,” said Brett Hammond, chief investment strategist at TIAA-CREF.

A Flood of Institutional Assets
The outlook for the future does not match recent experience. For one thing, the flood of assets into the sector, chasing high returns, is coming at a time that many consider to be a market top. Prices are being bid up, and there are fewer and fewer attractive deals. Cap rates, or expected net operating income (NOI) over purchase price, is a commonly used measure to evaluate real estate deals. It essentially equates to an earnings yield measure on a common stock. Cap rates on some recent deals have been as low as 4 percent, suggesting that there is significant growth in rents being priced into these transactions (or more drastically, a reduction in economy-wide return on capital).

This influx of investment is not necessarily coming from experienced real estate investors, either. New investors are piling into this asset class, including many at the institutional level. In one case, “Thirty percent of the institutional investors committing assets to Prudential Real Estate’s $8.5 billion Prudential Property Investment Separate Account were investors new to the asset class,” said Charlie Lowrey, CEO of Prudential Real Estate Investors. This is in addition to the market-changing effect of these markets now being available.
Diversification

So why would anyone want to invest in real estate? For one thing, the reasons that make it risky also mean that the returns should be good for skilled and patient investors. Sharpe ratios for the indices are consistently higher than for either stocks or bonds. More importantly, low correlations with other asset classes bring significant diversification benefits. A study done by the Center for International Securities and Derivatives Markets (CISDM), at the Isenberg School of Management at the University of Massachusetts, compares correlations between several real estate indices and several broader market measures.7 The study finds the covariance of the MIT and NCREIF indices with the S&P 500 to be 0.06 and 0.00, respectively. Further, the study creates hypothetical portfolios consisting of 40 percent S&P, 40 percent Lehman U.S. Aggregate, and 20 percent real estate indices, and compares them to a 50/50 stock and bond portfolio. Adding the NCREIF index component increases the Sharpe ratio from 0.66 to 0.78, and adding the MIT index takes it to 0.83.

Clearly, a balanced portfolio can be made more efficient with the inclusion of low-correlated real estate assets, though it is important to note again that the real estate indices are not directly investable. REIT indices, while being investable, and therefore a more realistic portfolio component, do not perform as well over the longer term, and show higher correlation with the S&P and Lehman indices, of 0.36 and 0.17 respectively. These numbers vary somewhat when looked at for the 2001–2005 period, with the REIT portfolio showing a higher Sharpe ratio. All portfolios including real estate, however, show improvement over a simple stock and bond mix.

Another argument in favor of real estate investment is that like many real assets, real estate can be an effective hedge against inflation. Many studies have looked at this claim. While the results have been mixed due to differing model specifications and the limited availability of accurate historical data, the general conclusion is that real estate is an effective hedge. Goetzmann and Valaitis, in a recent paper, find that the strength of the relationship has declined over time, coinciding with changes in the regulatory environment and lending practices.8 With the data split into two periods, they find the correlation between commercial real estate and inflation to be 0.66 from 1978 to 1992, and 0.29 from 1992 to 2005. In both periods, commercial real estate tracked inflation better than residential housing, equities, and fixed income did. While the relationship weakened in the second period, it was still stronger than the other asset classes.

Real estate has been shown to be an important piece of a diversified institutional portfolio, though the data are not definitive. There are questions as to the reliability and usefulness of the limited data available, and questions about how certain relationships change over time. Real estate investment options are changing, with REITS becoming a more viable option, though still with some problems, not least the fact that they seem to lose some of their diversification benefits. International real estate markets are also becoming increasingly available, either directly or through REIT-like structures. Some estimate that European REITs could some day represent 35 to 40 percent of the global REIT market, with several large countries just now introducing the structures. Real estate is maturing as a market around the world, and is something that institutional investors should certainly be aware of.

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A Tipping Point for TIPS
By Jose Roberto Magana, MBA/MSF ’08

It is not a revelation that inflation is a concern for investors. Pricing power erosion is one of the most important risks that investors face because it dilutes the purchasing power of their investments, which in the case of bonds, is normally fixed. Thus, investors try to find different ways to protect against abrupt changes in the real value of the future payments they will receive. This article provides a general background and mechanics of one such solution: Treasury Inflation-Protected Securities, or TIPS.

A bond is an instrument that promises fixed-interest periodic payments during a determined period and a principal final payment at the end. These payments are assured when the bond is issued, and investors can easily predict them when bonds are traded in the secondary market. However, the fact that these payments are constant leaves the door open for erosion of their real value; that is, by definition, the most important issue investors take into account when they decide the yield that they should ask for a bond.

Inflation-indexed bonds are alternative investments that ensure bondholders a “real” rate of return. These securities protect investors’ purchasing power because their coupon or principal is adjusted to compensate for changes in inflation. These bonds are issued because both parties (issuer and investor) can benefit from their characteristics. The U.S. government is the main participant in this market. If inflation remains tame, it may see its cost of borrowing money decrease or remain stable. Potential investors may not ask for additional yield to compensate for the uncertainty of volatility in prices if issuers’ income or investors’ obligations are hedged to inflation. Of course, if inflation accelerates, the U.S. Treasury will have to pay larger interest rates and final principal payments to bondholders. Several governments, including Canada, New Zealand, and the United Kingdom, with minor changes in their characteristics, issue these bonds.

Are TIPS a Bond Investment or Separate Asset Class?
The basic idea of coupon and principal payments is the same. TIPS just require that these payments are translated into “real” disbursements. In fact, inflation-protected bonds have a fixed coupon rate that will not change over the life of the issue, such as a plain vanilla bond. These investments adjust principal using changes in the Consumer Price Index (CPI), which becomes the new base to calculate interest payments.9

For example, let us assume TIPS with a principal of $1,000 and a coupon of 5 percent, are issued on January 1, 2006. During the first six months, inflation jumps 1 percent so the inflation-adjusted amount of the note would be $1,010 ($1,000 x 1.01). The first coupon payment, on June 1, would be based on the new inflation-adjusted principal, not the original-issue par amount: $1,010 x 5%/2 = $25.25. At maturity, the inflation-adjusted principal is repaid. Although inflation generally increases over time, it is also possible that deflation lowers the principal amount below the par value because it is estimated using the change in the CPI.10

Investment consultants, pension funds, and investment managers still are in some disagreement as to whether TIPS are bonds, or should be considered a separate asset class. While TIPS appear similar to nominal bonds, TIPS have been less volatile, and have different correlations to other asset classes. No matter where one comes down, it is clear that institutional investors are interested in the benefits of TIPS, although it may take a more volatile inflationary environment to see how much TIPS differ from regular bonds.

Demand for TIPS
Institutional investors are natural buyers of these securities; investments that can provide guaranteed returns above inflation over a long period of time are attractive. According to the Treasury Department, using data since 2000 to date, primary dealers are the largest buyers of these securities with almost 66 percent of the purchases. These dealers include big brokerage firms that eventually sell these bonds to their clients (retail or institutional) or may use them to speculate. International investors account for 13 percent of the volume and investment funds bought 11 percent of the total value. In other words, just like other fixed-income mandates, many pension funds access TIPS through their investment managers. A variety of TIPS or inflation-protected mutual funds are also available to retail investors. For long-term buyers, it is interesting that, according to Bloomberg data, the average real return on nominal long bonds over the past 80 years is just 1.9 percent. Short-term inflation forecasts tend to be volatile, increasing the price risk of Treasuries.

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10 For a detailed look at the CPI, refer to http://stats.bls.gov.
PORTABLE ALPHA HAS BEEN THE BIGGEST BUZZWORD in institutional investing over the last three years. While there is a wealth of literature and marketing materials on portable alpha available, BC Financial takes a quick look at how a portable alpha strategy might actually work, and why it is different from traditional strategies. The question remains: How much of portable alpha is a marketing gimmick, and how much can portable alpha strategies help plan sponsors in their search for higher returns and lower risk?

Plan sponsors have traditionally been limited to investing in long-only portfolios. Furthermore, many have concentrated a majority of their investment allocation in domestic equity, run by active managers. Without going into too much Investments 101 or CFA review on alpha and beta, by allocating assets to active domestic equity managers, plan sponsors are combining a decision about market exposure (beta) and manager skill (alpha).

While many investment managers are active managers, or at least charge active fees, many perform fairly close to their benchmarks, that is, provide simple market exposure or beta. Plan sponsors could more easily and cheaply gain such beta through a passive manager. Active managers are hired to provide returns above and beyond simple market exposure. This alpha comes from skillful security selection—taking risks beyond those incorporated in the benchmark. Portable alpha refers to the process of separating the alpha component from beta within an allocation and applying it over the whole portfolio. Since the portable alpha component is usually uncorrelated with other asset classes, the overall risk of the portfolio is also reduced.

Plan sponsors can implement a portable alpha strategy by strategic asset allocation or through an overlay. For example, sponsors can outright allocate a portion of the plan to portable alpha managers or
allocate while using futures or swaps to maintain the existing asset allocations. The process of using derivatives to maintain strategic asset allocation is known as equitization. Such portfolios are known as beta or market neutral because they neutralize any new market exposure. However, if sponsors are unwilling or unable to shift capital to alpha managers, they may seek alpha through futures on market segments they estimate to be on the uptick (remember that the margin on futures is typically only 3 to 5 percent). Since the futures are usually uncorrelated with the benchmark from which they were funded, they can be a source of higher risk-adjusted returns. This potential alpha can “overlay” the entire portfolio.

**So How Would This Actually Work?**

Take, for example, a large-cap domestic equity allocation. Traditionally, small-cap stocks provide greater returns than large-cap stocks but with greater risk. Plan sponsors wanting to maintain an existing allocation to large-cap equity, but gain exposure to small cap, could use a portable alpha strategy. For example, a plan could reduce its large-cap domestic equity allocation by, say, 10 percent and use that money to fund an investment in small caps while using futures to maintain the original large-cap allocation and neutralize the small-cap exposure. Assuming that the 10 percent equals $1 million, sponsors purchase an equal amount of large-cap futures (say, on the S&P 500 index) to maintain the original allocation to large cap, pay the 5 percent margin, and invest the remaining $950,000 with active small-cap managers perceived to have the ability to beat the market. To then eliminate exposure to small caps, the sponsor would short small-cap index futures like those on the Russell 2000 index. The alpha generated by the small-cap manager is ported over the entire allocation. Portable alpha strategies do not limit sponsors to the same allocation; rather, sponsors could use fixed-income or international equity managers to generate alpha in this example, as long as there are futures or exchange-traded funds (ETFs) available to neutralize the beta exposure. Of course, the plan sponsor could do all this, or simply hire a portable alpha manager to do it. The latter costs more, of course.

While strategies using equitization can provide greater flexibility, capital constraints may prevent sponsors from an outright allocation to portable alpha managers. In such instances, futures allow plans to overlay alpha without committing capital other than the margin requirements. For example, if the plan sponsor perceives the fixed-income market to be generating significant alpha, the sponsor can go long in Lehman Aggregate index futures for the entire amount of the allocation or just a portion, depending on how much margin the sponsor can afford or risk the sponsor cares to take. The same could be done for an equity portfolio and accompanying index futures or ETFs.

**So Will This Actually Work?**

A successful portable alpha plan depends on the manager’s ability to generate consistent alpha that has a low correlation with the major indices, and on the sponsor’s ability to find them. That bears repeating: Success in portable alpha depends on manager skill, and on locating that skill. If a manager cannot consistently generate excess returns—as many active managers over long periods of time have failed to do—portable alpha programs will not be successful. It is just clever marketing.

Liquidity is also a major concern. Because a hedging vehicle is required to eliminate market exposure, such a vehicle must be available. Strategies like real estate and private equity, where no such vehicle is readily available, cannot be incorporated. Furthermore, significant alpha must be generated to make the strategy worthwhile given the costs involved. Most efficient asset classes can’t foot the bill. Although plans have been actively inquiring about portable alpha, many are still hesitant to implement derivatives-based strategies. Endowments, for one, which don’t have the liquidity constraints or liability strain that pensions have, gain no real benefit from the extra costs of the strategy.

At the very least, though, portable alpha and other new strategies are pushing institutional investors to evolve. Portable alpha requires plans and trustees to have a solid grasp on investment theory and risk. It also requires an understanding or willingness to embrace new asset classes and the explosion in financial engineering in the financial markets.

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Who are they?

Investment consulting is a hugely influential but relatively unknown financial specialty. As of 2004, it was estimated that investment consultants advised on over $13 trillion in the United States alone.\(^1\) As the profession has grown in size, so too has the controversy surrounding it.

Investment consultants help firms and organizations manage financial assets to achieve the financial goals of a particular institution. For example, an important application of investment consulting is helping large pension sponsors manage pension fund assets in a way that will allow them to meet obligations to both participants and shareholders. On the surface, this seems simple. But it is far from it. The company must consider whether it has enough assets to satisfy benefit obligations, and what the timing will be for distributions. Depending on the obligations, timing, and

\(^1\) Pensions and Investments, www.pionline.com, September 30, 2004
other factors, the company must determine which asset classes it will invest in. That could range from equities and fixed income, or perhaps an alternative investment such as real estate. Once this is determined, the company should investigate which managers are best for each of these asset classes. Within a given asset class, such as equities, a manager may have a number of different styles. Finally, the company must monitor its investments on an ongoing basis to ensure that everything is moving along smoothly, and respond when it is not.

The above example attempts to illustrate the amount of time and expertise that is needed to manage pension assets. In the past, this responsibility may have fallen to the CFO or the treasurer in addition to a group of plan trustees. However, these executives (and the trustees) have many other responsibilities that may be more important to the core operations of the company. But the prudent management of pension assets is also critical to employees and management. So, instead of spending time trying to research and monitor what to do with the pension assets (an area where the executives may not be particularly skilled), the task is outsourced to an investment consultant. Even when companies have a dedicated professional pension manager looking after a pension fund, as many companies with large plans do, the services of an investment consultant may be required. The investment consultant works with the company’s management in order to help determine investment policy, asset allocation, and the best outside managers to implement the investment strategy. Consultants also provide reporting and manager monitoring services.

The Rise of Investment Consultants as Gatekeepers
A number of factors have led to the growth of investment consultants. The returns from equity markets are not expected to be as strong as they were in the 1980s and 1990s. At the same time, interest rates are low, which have inflated future benefit obligations. The combination of lower returns and higher benefit obligations has put many corporations into underfunded status. As a result, plans are searching for new strategies, and investing has grown beyond stocks and bonds. Today, it is common for institutions to invest in commodities, real estate, private equity, venture capital, and a host of other alternative investments. Pension plans rely on their investment consultants to help them navigate the changing world of institutional investing.

Investment consultants act as a bridge between asset managers and institutions with funds that must be managed. Over 70 percent of large pension funds in the United States use an investment consultant, so they truly are gatekeepers to institutional investors, according to Greenwich Associates research.

Investment consultants, especially the large ones, maintain databases of investment managers and meet with many, many of these firms. For asset managers, this means that updating the databases of and meeting with researchers at the largest consulting firms is a hugely leveraged way to market and sell to many corporate pension funds. In fact, investment consultants are so important in winning new business, large asset managers have specialized consultant relations staff that work directly with the investment consulting community. Of course, investment managers will still want to market directly to plan sponsors themselves, as 30 percent do not use a consultant.

The Business of Investment Consulting
The largest investment consultants include Russell, Mercer, Hewitt, and Watson Wyatt. Each of these firms has other businesses out of which the consulting business grew. For example, Mercer and Watson Wyatt have large actuarial businesses. There are also a large number of smaller consulting firms. The top ten firms have approximately 74 percent of the market as measured by assets advised. Within the endowment and foundation market, Cambridge Associates is the dominant consulting firm.

The firms at the top of the market have gained some scale by building a manager research platform separate from the client-facing consultants. At the lower end of the investment consulting industry, business remains somewhat fragmented, in part, because the consultants maintain client relationships but also conduct manager research. Asset management is a very scalable business. A typical asset manager may have the capacity to double the number of clients served as well as the assets under management without having to add much staff. In contrast, investment consultants must address the needs of each client separately, since client needs may differ substantially. This individual attention takes time, and in turn places limits on the number of clients an individual consultant will be able to serve. This lack of scalability has left the lower part of the industry somewhat fragmented.

Under Fire
Of course, the growth in importance of investment consultants has put consultants on the firing line. Critics question whether investment consultants are really necessary. Indeed, they wonder aloud why a company cannot find asset managers on its own. Using an investment consultant adds a layer of fees, which can have a detrimental impact on the overall returns. In fact, Warren Buffett criticized investment consultants, along with a number of other investment professions, stating that they were collectively taking a piece of the pie that would
otherwise go to the underlying investors.²

Some critics argue that consultants guide clients to identify domestic equity investment managers by style and market capitalization specialty, but that they also constrain investment management skill through too much measurement. Another criticism has been that consultants have been late adopters to many trends. Currently, consultants are leading their clients into hedge funds and other investments that “unconstrain” managers, but are doing so as they are ramping up manager research staff and knowledge themselves.

Of course, many of these criticisms are levied by investment managers, many of whom are also involved in selling specialized equity products, and are offering “unconstrained” products to the market now. Even if one is bearish on consultants’ capabilities, in the current environment plan sponsors are resource constrained and often need the variety of important services beyond manager searches that consultants provide.

Additionally, questions arise about the possibility for conflicts of interest in three general areas:

• Investment consultants might get too cozy with the asset managers that they are choosing to manage funds. Some consulting firms offer consulting services to asset managers and host conferences that bring plan sponsors and asset managers together, inviting questions of whether asset managers are required to “pay to play.”

• Other consultants are affiliated with large brokerage firms and are paid on a soft-dollar basis rather than a retainer. So consultants are paid out of part of the commissions a pension fund’s investment managers are generating with a broker. This invites accusations of whether a consultant will recommend managers who will trade with the brokerage firm unnecessarily.

• The final area of conflict is in offering asset management services. In this case, investment consultants usually take expertise at managing investment managers and create fund-of-fund products. The conflict of interest can arise when a consultant recommends to clients the fund-of-funds he or she has.

Possible conflicts of interests appear in almost all aspects of the financial services industry. The potential for conflicts in investment consulting is front and center because the profession has been gaining momentum as a wave of corporate scandals has hit the press. Many independent investment consultants now make it known that they are independent and do not have relationships with asset managers or brokerage firms.

The Future

It is difficult to predict where this field will be a decade from now. However, it seems certain that investment consultants are adding value for many institutions. With so many business functions being outsourced today, it seems logical for an institution to find someone else to do a job that falls outside of its area of expertise.

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The Paradigm Shift: Defined Contribution Plans

By Jason Roberts, MBA ’07
The Landscape

Does the average American worker have the discipline to save for a sufficient retirement? Or, does the average American worker look to have their funds distributed according to a plan for the rest of his or her life? In fact, do average MBA students know how much they will need to save to retire at 60 or 65 and live a lifestyle to which they hope to become accustomed?

A 401(k) and other defined contribution (DC) plans offer important benefits to employees in that they are portable, tax-advantaged, and offer flexibility in contribution amounts and investment options (usually at lower than retail fees). Unfortunately, it is no secret that American consumers are not always financially responsible. And as retirement funding shifts to the individual, problems are likely to arise around the issues of contributions, smart investments, and wise spending on a variety of levels discussed below.

Participation
The first step to saving for retirement is enrolling in a 401(k) plan. The first problem facing DC plan sponsors is just getting people to enroll and participate. This is problematic among younger employees entering the workforce. They have the lowest enrollment rates, but benefit most from the “magic” of compounding returns. The new Pension Security Act encouraging automatic enrollment should help raise participation, especially in such low-enrollment groups.

The Pension Security Act of 2006 encourages employers to get involved and make such advice available to their employees by automatic enrollment into 401(k) plans. Employees who do not want to participate would have to opt out, diminishing plan sponsors’ liability.

Contributions
The second problem is the amount saved. The way employees allocate assets and the funds they pick are important variables in how much they will have in retirement. But the primary driver of the assets retirees have upon retirement in a DC system is the amount they save. Few employees max out the annual $15,000 limit, but many do not save enough to take full advantage of a company matching policy, in effect, leaving free money on the table.

Asset Allocation and Advice
The third issue relates to asset allocation, or how the money is invested. Far too many people leave their retirement savings in default money market accounts, while others go the other way and have too much invested in the hot new aggressive fund. Strikingly, even after the collapse of Enron and the lessons on diversification provided, many employees are overweight in their own company’s stock, while being underweight in international investments.

Several studies have also shown that the more investment choices a plan offers employees, the more likely it is for employees not to choose anything nor to rebalance their portfolio. The rise of lifecycle funds as a default option promises to take many of the asset allocation decisions out of the hands of individuals and leave it to professionals.

As it has become clear employees need assistance with asset allocation, companies are offering tools created by firms such as Financial Engines or Ibbotson. Some companies are offering access

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1 Rebalancing is simply moving assets back to a target asset allocation in the event of market movements. In the 401(k) context, rebalancing is the buying or selling of funds to meet a target asset allocation in the event one asset class or fund has gains or losses outside of a certain range (5 or 10 percent of a target allocation). For example, when the equity markets declined in 2002, a rebalancing policy would have called for a reallocation of assets from fixed income to equities. Rebalancing reinforces a buy-low, sell-high discipline.
to financial advisors, and people seem responsive to the offer for such services. According to a recent survey, “More than half of the 14,194 active participants in a two-year-old program offered by retirement specialist Invesmart Inc. have opted for a $10 per month service in which the company’s adviser arm manages their defined contribution account. The buy-in rate is 57 percent.”

401(k) Fees and Costs
The fourth issue facing DC plan sponsors and employees are the fees involved in DC plans. Companies face a trade-off between lowering corporate costs and the convenience of a one-stop solution and the responsibility to offer employees the best investment options. While employees can control costs by carefully selecting from passive and institutionally priced active investment management options, if available, they generally bear the costs of record keeping and retail mutual fund options.

Despite Vanguard’s marketing efforts to educate people on watching costs, it took a mutual fund trading scandal and Eliot Spitzer to inch mutual fund fees down slightly. While there is a question on how much employees look at fees, this will become more salient in a low-return environment. Fees and costs do not get a lot of attention currently, compared to the first three issues mentioned above, but as employees near retirement and have not saved enough, one area regulators and politicians will look at is high mutual fund fees (and high profitability of mutual fund companies), and companies will begin to take a closer look at costs.

Spending in Retirement
And finally, the issue of how retirees draw down saved assets is important, and one that we’ll look at in more depth in the remainder of this article. Where a DB plan pools investment and mortality risks, for an individual life expectancy and future investment returns are important unknown variables that can throw a wrench into even the best laid plans. The asset management and insurance communities have a challenge and opportunity in developing cost-effective products that protect retirees against these risks, and help them safely draw down their assets (spend their money) in retirement.

The Reality: An Advisor’s Experience
As a former employee at a financial advisor specializing in rollovers and pension buyouts, our practice saw two generic types of retirees. The first was the retiree who sought immediate access to funds previously tied to IRS penalties. When their big lump sum freed up upon retirement, they would purchase a retirement home with plans to sell their current home. Some did, some did not. Carrying two mortgages and having retired early, these retirees would need more income from their funds to cover such expenses. With plans for small jobs on the side until Social Security kicks in, they would ultimately spend 20 percent of their assets, when the plan calls for 10 percent, within the first 18 months of retirement.

The second type of retiree, and the type we hope is more commonplace, is the one who follows their plan. These people either educate themselves or work with an advisor. They plan early and review their plan regularly. And, once they are in retirement, they follow their withdrawal rates according to their analysis. Figure 1 provides a quick illustration of the differences in following a plan and spending too much initially in retirement, which can be a disaster when combined with a relatively small downturn in the market.

The Rise of Lifecycle Funds
Lifecycle funds are generally “asset allocation” or balanced funds that invest in equities, fixed income, and cash. They come in two general varieties. The first is a “lifestyle” fund, which allocates assets according to risk tolerance, such as conservative for those in or nearing retirement, and aggressive for the young. The second type of lifecycle funds have target retirement dates, and will automatically shift the asset allocation from aggressive to conservative as the date approaches.

The benefit of lifecycle funds is that they give the task of asset allocation over to an investment professional. A drawback is that if employees allocate just a small portion of their assets to a lifecycle fund (as if it were any other fund), they negate the asset allocation benefits. A second drawback is that providers of lifecycle funds often create them using a fund-of-funds structure (using other mutual funds or outside managers). This results in a second layer of fees.

Lifecycle funds are an important trend in the asset management industry. Over 55 percent of DC plans offered a lifecycle fund option in 2005 according to Hewitt Associates, up from 35 percent in 2004. They are also often the default choices in 529 college savings plans. According to Lipper, as of 2004, lifecycle funds held $140 billion in assets, up from $101 billion in 2003. The Investment Company Institute put lifecycle fund assets at $167 billion in 2005. The largest retirement services providers, Fidelity, Vanguard, and T. Rowe Price, along with Russell Investment Group, are the largest players in offering lifecycle funds.
The Examples

The chart below shows three scenarios:

![Figure 1: U.S. Retirement Assets, 2005 (in Trillions)](image)

**Scenario 1 is the Ideal Retirement Situation**
- Initial Retirement Account Value: $800,000
- Withdrawal Rate: 5 percent or $40,000
- Portfolio Rate of Return: 7.5 percent
- Initial withdrawal of $40,000 is increased by 3 percent to adjust for inflation.

**Scenario 2 is an Overzealous Retiree**
- Initial Retirement Account Value: $800,000
- Withdrawal Rate: 15 percent in year 1 ($120,000), 12 percent of the originally assumed value for the account (~$98,000), 5 percent per year of the initial assumed values thereafter
- Portfolio Rate of Return: 7.5 percent
- Initial withdrawal of $40,000 is increased by 3 percent per year to adjust for inflation.

**Scenario 3 is an Overzealous Retiree in a Market with an Initial Decline in Year 2**
- Initial Retirement Account Value: $800,000
- Withdrawal Rate: 15 percent in year 1 ($120,000), 12 percent of the originally assumed value for the account (~$98,000), 5 percent per year of the initial assumed values thereafter
- Portfolio Rate of Return: 7.5 percent, except in year 2 – rate of return is -10 percent
- Initial “planned” withdrawal rate of $40,000 is increased by 3 percent per year for inflation.

**The Shift from DB to DC, and Savings**

The recent shift in responsibility from employers to employees may lead to a nation of bankrupt retirees. Many experts have a very real concern that without proper guidance and withdrawal limits, this nation’s baby boomer generation is in danger of simply running out of money in retirement.

The problem does not stop with personal responsibility; projecting retirement income requires information on life expectancy, investment returns, and even withdrawal rates. The troublesome secondary effect is the swap from pension to 401(k). Questions arise: Is it an even swap? Are companies going to fund as much of a 401(k) as they would a pension? Is the difference in deferred income the same or different from pension contributions? What we are seeing is the freezing of pension benefits and the implementation of 401(k) plans. Companies need now to fund their current pension liability, and make a match into a 401(k) plan. Logical questions beyond this would be: How do workers calculate these changes? And what changes in personal savings need to be made?

According to a recent study by Temple University Professor Jack VanDerhei (an expert on Social Security reform and pension planning), “For workers in so-called final-average pension plans, the replacement contribution to the 401(k) would have to rise by an average of 8 percentage points to cover the lost pension benefits.” VanDerhei says, “That means, if the company offers a 3 percent match, the match would have to rise to 11 percent for the workers to come out even.”

Given the current landscape, it is unlikely contributions of 11 percent will be happening any time soon. According to 401(k) Advisor, the average matching company’s contribution is 2.9 percent of pay.

**Working Together Toward a Solution**

What are the potential solutions to a retirement savings shortfall? One is government regulation on how individuals save, invest, and withdraw their money. But business leaders are wary of regulation, and market forces may offer a better solution. In this instance, there is truly an opportunity for employers to take on increased responsibility and assist employees in meeting their retirement goals. While government intervention may be necessary to spur employers on or remove obstacles (i.e., liability), the asset management industry and corporations would be better off working on appropriate solutions. There is a chance that mutual fund fees are going to come under

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pressure as companies and employees focus on retirement costs, and margins in the industry will be reduced. How much of this is forced on asset managers by the government versus market forces can be partly determined by how well asset managers can influence a shift in savings and investing behavior (and offer a broad array of cost-effective options). While there may be conflicts of interest in this approach, increased retirement savings and resulting assets under management (AUM) can benefit multiple stakeholders.

Along these lines, educating employers and sponsors, structuring of annual withdrawals, asset allocation models, unbiased financial advisors and the use of new tools, such as Monte Carlo simulation are all ways in which the industry could continue to expand while assisting retirees and workers.

There is no single solution, but rather a combination of events needs to occur as the baby boomer generation heads into retirement. The following recommended steps can help inform and alert the public to critical issues involved in this new DC paradigm:

1. Increase the allowed savings rates for 401(k), 403(b), and other defined contribution plans.

2. Provide retirees with the option to access asset allocation plans offered by low-fee asset management providers—passive indexed mutual funds. All large retirement providers should offer low-fee options for retirement products (acknowledging this is easier said than done, depending on firms’ cost structures).

3. Help individuals invest in plans where assets are allocated based on a risk tolerance and time frame (lifecycle funds)—similar to the current 529 savings plans.

4. Provide continued education for current defined contribution savers to make individuals aware of the need to save an adequate amount for retirement.

5. Restrict withdrawals to those affordable by the participant, perhaps creating a process similar to that for 401(k) loans or hardship withdrawals. Harsh penalties should apply to early withdrawals.

6. Require unbiased educational seminars for individuals who choose a lump sum at retirement.

These are some possible steps to ensure the retirement income security of the largest retirement population that this country has ever seen. Progress in one or two of these areas will greatly increase the chance of success.

Monte Carlo Simulation

Monte Carlo simulation is a new term introduced in this article. Your typical personal financial plan differs significantly from your typical corporate financial plan in one significant way: Personal financial planning characteristically relies on utilizing the averages, whereas corporate financial planning has a best case, likely case, and worst case scenario built into its modeling. Oftentimes, this simplistic view adopted in personal financial planning is not sufficient, so professionals have introduced a more “realistic” approach to financial planning—Monte Carlo simulation.

Monte Carlo simulation is a method of analysis that approximates the probability of certain outcomes by running a large number of trials, adjusting random variables in each trial. In financial planning terms, an individual can see the probability of the income in retirement based on variables such as their personal savings rate, inflation, asset allocation, personal spending rate, and investment return. Companies such as Ameriprise Financial adopted this approach in offering financial advice. Their Monte Carlo results provide a more accurate description of a person’s financial situation.

Monte Carlo: Not Infallible

“There’s nothing magical about it or any other type of analysis,” says Dan Candura, certified financial planner with ING Financial Horizons in Boston. “The future is unknowable, and short of the oracle of Delphi, it’s been a long time since anyone predicted the future.” As with many models, Monte Carlo simulation is only as good as its underlying assumptions. That said, it can help individuals see a range of possible outcomes and promote increased savings by heightening sensitivity to risk.

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IN THIS FEATURE, WE TYPICALLY TRY TO ILLUSTRATE the types of positions available in an industry. All practitioners and most MBA students are familiar with the roles at investment management firms. In some form or another, they are: portfolio manager, analyst, trader. So we thought we'd focus on anecdotal career “trends” and introduce some areas of institutional investment management with which MBA students may be less familiar.

Sell-side research analyst and trading positions at bulge bracket brokerages and analyst and portfolio manager roles at large buy-side firms in Boston used to have their pick of MBA recruits. And while these firms still offer great opportunities, new MBAs and professionals in the industry have to ask themselves, what type of company is going to be successful over the next 20 to 30 years?

On the sell side, the rise of electronic (and algorithmic) trading and the outsourcing of traditional analyst work (industry research, heavy Excel lifting, etc.)—along with the “separation” of research from investment banking—gives rise to questions about the attractiveness of analyst and trader positions at brokerages. Wall Street analysts are still regarded as experts in their industries with important access to company management. While the pay is very good, the hours continue to be grueling and bonuses less attractive compared to the investment bankers and analyst peers at hedge funds. It is the proprietary trading operations, derivatives trading, and prime brokerage areas of the bulge bracket banks that are profitable these days.

On the buy side, there are questions of how well mid-size mutual fund companies with multiple products and mediocre performance will fare over the long term. Voting with their feet, many recent MBAs are migrating to hedge funds and private equity firms, as well as top-quality “traditional” investment management firms.

As with most financial fields, newly minted MBAs usually start out as analysts or associates and work their way up the ranks to become portfolio managers, CIOs, partners, or managing directors.

That said, within firms that provide services to demanding institutional investors, many MBAs do not consider careers in areas outside of managing the money. At small firms, the roles of selling and marketing to clients, managing relationships, working with consultants, and creating new products are all done by one person or shared by the principals of the firm. As a firm expands in size, these responsibilities are broken out into distinct departments. These include

- sales and marketing (or business development),
- relationship or account management (investor relations at hedge funds),
- product management, and
- consultant relations.

Of course, finance and business analysis positions are available at the larger firms as well.

At the mutual fund houses, MBAs can also find opportunities in customer service management (operations) and retail marketing. In addition, it is our view that as retiree advice and spending in retirement become more important, increased product management opportunities (for planning tools or annuity-type products) will arise.
Outside of institutional investment management firms, some of the other entities in the institutional money management universe to think about are:

**Pension Funds and Endowments**

As highlighted in our interview with Jennifer Paquette, institutional investors require talented investment professionals to manage assets. At many corporate pension funds, retirement funds are managed by a dedicated pension manager, or by the treasurer or CFO. At larger funds, there is a chief investment officer (CIO) responsible for working with the board on investment policy and asset allocation. In addition, the largest funds maintain an investment staff to either make investments or monitor managers and performance. There are often investment specialists who focus on an asset class and manage the investments or managers in that asset class. Compensation for these roles typically does not carry the bonus structure of professionals on the buy side, but working at a pension fund provides exposure to all asset classes and a wide array of investment managers and strategies.

**Investment Consulting**

As described in our article on the industry, 70 percent of pension funds use an investment consultant. While the consulting industry is changing, there are currently two primary roles at a firm: investment and manager research, and client-facing consultants. At smaller consultants, principals of the firm perform both tasks, while at larger firms there is more separation. For MBA students (with some experience), some of these firms may be on the lookout for research staff as the universe of managers expands into alternative investments.

**Investment Banking**

As mentioned in our article on institutional investing and LDI, large banks are playing an increasingly important role in institutional fund management—in particular, the use of derivatives to control risks. Almost every large investment bank now has a department focused on the derivatives needs of pension funds and insurance companies. Most of these are located in Europe, but as regulations change in America these groups may be built up here. Of course, in the realm of derivatives—customized or for plain interest rate swaps—very strong quantitative skills are required, and the long hours still apply. For new MBAs, access to these groups would likely be through an associate program, although there may be opportunities for direct hires if there is prior experience.

**Custodians, Strategy Consultants, and Information Providers**

Outside of the buy-side and sell-side firms, there is a wide array of firms to explore, all of which have business development, product management, marketing, operations, and finance/accounting needs. These types of firms include:

- custodians, such as State Street Bank and Bank of New York,
- information providers, such as Thompson Financial, and
- strategy/management consultants, such as McKinsey, Bain, Cerulli, and Casey Quirk, among others.
JANE TISDALE is the head of State Street Global Advisors’ absolute return business. While SSgA is one of the world’s largest index, or beta, managers, the firm has also been managing a full range of active strategies including absolute return, or hedge fund, strategies since 1990. More recently, given demand from institutional clients, SSgA has significantly expanded its absolute return capabilities. Ms. Tisdale was kind enough to sit down with BC Financial to discuss key trends in institutional fund management, SSgA, and her career.

Ms. Tisdale received an MS in Finance from the Wallace E. Carroll School of Management at Boston College and a BS in Finance from Ithaca College. She has earned the Chartered Financial Analyst designation, and is a member of the Boston Security Analysts Society and CFA Institute. Prior to her current role, Ms. Tisdale held several positions at SSgA, including Managing Director of Product Engineering and portfolio manager on large- and mid-cap portfolios in the US Active Quantitative Group.
Institutional Investor Interest In Hedge Funds

BCF: What are the biggest issues your institutional investor clients face—Why is there institutional demand for hedge funds?

JT: There are several reasons. First and foremost is the need for solid returns. Pension underfunding, as you know, is a significant concern not only in the United States but around the globe. So they need to have some way to achieve the goals they have set for their pension fund.

So increasingly they are turning to absolute return strategies that can help them meet their targets. But also, even when the equity market or fixed-income market is doing particularly well, what institutions are looking to gain from absolute return strategies are the diversification benefits. When the equity markets are particularly strong, hedge funds may provide a reduction in volatility and an improvement in plan diversification. And you see this across the alternatives spectrum when you think about real estate, or timber, or any number of exposures.

Returns and diversification are the key reasons.

BCF: Are you seeing investment consultants embracing hedge funds?

JT: Yes, due to the interest from their clients. Consultants also see the realities of the marketplace. In the U.S., the average [rate of return] target is around 9 percent; plan sponsors and their consultants need to think creatively to hit that consistently.

BCF: How will the world of hedge funds change with the entry of so many institutional clients?

JT: Having institutional investors engaging more aggressively in this segment of the market will certainly have a significant impact. First, you have small boutique organizations that are not familiar with the requirements of institutional clients. A plan sponsor has to be able to explain to the board what risks and what exposures are embedded in the strategies. Therefore, reporting, transparency, and fund disclosures will need to meet the high standards of institutional investors.

BCF: At conferences in the past, when the buzzword “transparency” has been brought up, sometimes hedge fund folks would say, “We can give positions every month, but the clients wouldn’t know what to do with it.”

JT: And they are generally right—position level information is not going to give investors a full picture. They must have the context for the investments and how they fit into the overall strategy. Given the way trades are bundled together, position level data are almost too simplistic. Investors should also focus on risk characteristics specific to the strategy, like liquidity risk, which can give an indication of portfolio risk.

Having a good understanding of what risks the manager—and ultimately the client—is taking on is critical. If you look at traditional, boutique hedge funds, that type of information is not available and historically they have been able to succeed with the “trust me” approach. This won’t fly with institutional investors because they’ve got a fiduciary responsibility in many cases as well as headline risk.

BCF: So with the blow up at Amaranth and other hedge funds in the news, do clients call in more?

JT: Our clients are secure in what we offer and how important risk monitoring and control are to us. Additionally, the majority of our current strategies are “traditional”: equity market neutral, fixed-income strategies. The clients understand the risks associated with these strategies and are comfortable with our ability to manage the exposures. Therefore, no, they are not calling any more frequently.

That said, our clients are becoming more aware of the risks in general, and that these risks vary by strategy. Investors need to evaluate whether the exposures of the portfolio are appropriate to the investment strategy—whether the strategy involves weather futures or equity market neutral or merger arbitrage.

We are incorporating a mechanism to understand those risks and share that information with our clients—this we believe is a best practice in the marketplace.

BCF: That type of risk management fits well with SSgA’s reputation.

JT: Yes, our clients expect risk management from us. Given our heritage as a passive manager, risk management is a hallmark of SSgA.

BCF: We’ve talked a bit about this, but how does SSgA go about meeting client needs given the issues we’ve discussed above?

JT: It starts with our disclosures: We aim to communicate openly and clearly in all of our client communication about the risks associated with each strategy. In addition, we have put into place some technological tools that help us evaluate risk.

For example, we are using a front-end portfolio management tool that is tailored to the specific requirements of the manager. This is invaluable as it allows us to understand the Greeks, value-at-risk (VaR), and other risk metrics associated with each strategy.

And then, finally, in our reporting we ensure our clients have the information they need for their own analysis and for reporting to their boards.
BCF: In addition to risk management and reporting, what else does SSgA consider to be success factors?

JT: Clearly, the ability to generate returns is the critical success factor. Therefore, we spend a lot of time identifying portfolio management talent. We look for people with investment ideas that are uncorrelated with those currently on our platform.

BCF: You mentioned investment talent is a differentiator. What type of talent is SSgA looking for? What skills do you think someone entering the field should possess?

JT: We look for people who bring to SSgA a skill set we don’t currently have resident. We want people who can help expand our set of offerings. So currently we are focused on those with experience in merger arbitrage, event-driven, and commodity trading strategies, among others.

People in this field must be smart and creative; they also need to fit well within the SSgA culture. Our team culture may not be appealing to everyone, but I believe our success is a result of the teams we have built.

BCF: How do senior people with some of the skill sets mentioned decide between SSgA and starting their own firm?

JT: Given the regulatory environment and the fact that institutional investors are becoming more engaged in this space (with more requirements), coming to an institution like SSgA is becoming more attractive than it was several years ago. Large organizations like ours have the considerable research, risk management, and operations resources as well as reporting capabilities and compliance support necessary to support these strategies. If you start your own fund and do not grow above a billion dollars in assets, you are probably going to have a tough time replicating those resources.

BCF: Can you tell us a bit more about SSgA’s capabilities?

JT: SSgA’s strategies cover the spectrum from relative-value event-driven to opportunistic styles. These include equity, fixed-income, and arbitrage strategies, globally.

**Trends in Pension Funds and Retirement**

BCF: Shifting gears a bit, do you — or SSgA — have a long-term view on DB and DC plans and what it means for your business?

JT: Due to regulations in several countries requiring mark-to-market accounting, we’ve already seen a move toward freezing existing defined benefit plans and a growing focus on defined contribution plans. At the same time, more sponsors of DB plans and their consultants are recognizing the benefits of liability-driven investing (LDI) as a way to more efficiently allocate risk within their plans and better manage their expected liabilities. What we are beginning to see now is LDI “plus,” managing your greatest areas of liability risk by restructuring your fixed-income allocation and using that freed-up risk for alpha-generating strategies, including absolute return strategies. This provides not only the liability matching but also, for underfunded plans, using alpha overlays to improve returns.

BCF: A lot of plans see the writing on the wall: mark-to-market is coming.

JT: Yes, and we are beginning to see interest in the United States, and certainly in the U.K. and the Netherlands, where this has been an issue for some time.

BCF: Are investment banks a partner or a competitor in derivatives strategies?

JT: The investment banks are partners with us in many of our business lines.

BCF: What other trends are we seeing in retirement?

JT: Well, not many companies are starting up DB plans, so DC plans are increasingly important. The challenge with DC plans is employee education — this is critical. If not done properly, individuals will retire without enough money.

Large asset managers like SSgA with a long institutional heritage have an opportunity to apply the best practices we have developed for the DB world to the DC world. This includes critical areas such as asset allocation, diversification, rebalancing, and manager selection. The insights gained from liability-driven investing can be applied to the DC world as well. Individual DC participants have expected liabilities, too; how much money will they need to fund their retirement years?

So educating them on asset allocation, savings, and all of those sorts of issues is going to be important. To address this you are seeing companies adopting automatic enrollment and putting employees into default lifestyle funds. But, I have serious concerns about DC plans, as they currently stand, as a long-term viable solution for retirement. We expect to see a shift toward more outcome-oriented investment solutions as asset managers like SSgA collaborate with insurance companies to create new kinds of annuity-type investments.
BCF: Let’s talk a little bit about your career.

JT: I’ve been at SSgA for 17 years in a number of different capacities. I started in the comptrollers department doing accounting and financial planning. Several years after I finished my part-time MSF in 1991, I moved over to the investment side of the business.

In 1996, I became a product engineer. Product engineers at SSgA work closely with the investment teams but are more externally focused. They meet with clients and consultants to explain the investment philosophy and process of the team they represent. I think the product engineering role—or product management at other large firms—is a wonderful hybrid role, and SSgA does it better than most by having the product engineers report to the CIO.

As a product engineer, I worked primarily with our U.S. active quantitative equity team. I sat with the portfolio managers and eventually ran some portfolios. A little over two years ago, I became the head of the product engineering team. I managed a global team that covered all the asset classes managed by SSgA.

And about a year ago, I was asked to lead our absolute return effort, which is a key initiative at SSgA. This was a tremendous opportunity to build something from the ground up.

BCF: What have been some of the challenges—and successes—as you’ve started in your new role?

JT: The successes have far outweighed the challenges due to the strong cross-functional team I have benefited from. It has been wonderful to see how strong SSgA is across all parts of the organization: compliance, legal, investment management, operations, and technology. I am incredibly impressed with the organization and the people we have. They have all risen to the challenge, looked at things from a new perspective, and worked hard to get us to where we are today.

There have been challenges along the way—but nothing insurmountable. With such a large, new, and complex undertaking, things don’t always move as quickly as you would like.

BCF: What is the most important thing you learned while at BC?

JT: Most beneficial was learning the importance of working as a team. At BC, you have to do a lot of group projects. These can be tough because you have people from different backgrounds with different priorities (for me this was my full-time work). So you come together on a Saturday morning and try to work together to create the best paper or project. In the process, you learn to work as a team and to respect the input of others, because we all brought a different viewpoint and none of us was right 100 percent of the time. You have to listen to and evaluate problems from many perspectives, and come up with a clear, concise communication of the issues and solution. So being “forced” to work as a group was very beneficial.

BCF: Thank you for your time, and best of luck in your new role.

JT: Thank you.

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A Tipping Point for TIPS
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Newly issued TIPS can be purchased without any fee directly from the government through its TreasuryDirect program with minimum amounts of $1,000. Purchases throughout the rest of the year can be made on the secondary market through investment professionals, banks, and brokers. Those purchases will involve a fee or commission. The auction frequency depends on the maturity of the TIPS; 5 year TIPS are auctioned in April and reopened in October; 10 year TIPS are auctioned in January and July, and reopened in April and October; 20-year TIPS are auctioned in January and reopened in July. The reopened security has the same maturity date and interest date as the original security, but has a different issue date and usually a different price.

Small investors also have to pay taxes on the interest they receive and the increase of the inflation-adjusted principal even if it is not going to be received until the maturity of the bond. So TIPS are better suited for IRAs or tax-exempt retirement accounts. Another revolutionary channel to invest in TIPS is using exchange-traded funds such as iShares Lehman TIPS Bond (NYSE:TIP).

No Free Lunches

It is important to keep in mind that with all of the inflation-protection benefits offered, TIPS are not risk-free assets in terms of price volatility; real yields can fluctuate with inflation expectations so investors can enjoy substantial gains and losses. In addition, institutional (and retail) demand for inflation protection can bid up the price of these securities.

But given the long-term nature of many institutional funds, the outlook for the economy and inflation, and the high correlation of TIPS to inflation (and low correlation to other assets), an investment in TIPS has become a more important one for institutional investors.

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12 Laura Bruce, “TIPS - Enough Return for Your Money?” Bankrate.com, June 8, 2005.

Gatekeepers to Institutional Investors
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As discussed in previous articles, the most value is added in asset allocation. The selection which managers use is also a source of value added. Consultants have begun to take over more of the day-to-day management of a pension fund, and set up fees to be more asset and performance based. Some call this taking on “fiduciary responsibility,” although every party involved in a pension fund has a level of fiduciary responsibility, so there are questions as to what this entails. For a corporation or endowment, it means they are spending less time and resources worrying about a pension plan. For the consultant, it means higher fees. And in these types of fee arrangements, the interests of the investment consultants and clients are now more closely aligned, because if a plan performs well, the fees of the consultant will increase.

Another question facing the consulting industry is how consultants can handle the rising complexity of institutional investing, in particular, the proliferation of alternative investments. It is not a question of intelligence, but more of resources-how can a firm with a fixed research capability get to know all of the new asset management firms? There are many new strategies and thousands of hedge funds, private equity firms, commodity trading advisors (CTAs), and real estate investment firms on top of the thousands of traditional equity and fixed-income managers offering services. This points to an increase in importance of the large consultants who can tackle these changes, but also points to opportunities for smaller consulting firms to set themselves apart by specializing in specific alternative asset classes.

Finally, investment consultants’ primary source of revenues in the past was defined benefit pension funds, but we are now moving toward a defined contribution model. So while DB clients will need investment consultants for many years to come, these plans and assets are not growing. In this context, there exists an opportunity to help corporations select investment managers that fill out 401(k) options (and negotiate fees in 401(k) plans). In addition, as more mutual fund and insurance companies create sub-advised mutual funds and funds-of-funds (rather than manufacturing investment products in-house), they may require the manager evaluation and monitoring services of investment consultants.

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The Changing World of Institutional Investors

CONTINUED FROM PAGE 7

What type of investment firm will emerge in the next ten years, now that defined benefit (DB) plans are less important, defined contribution (DC) plans are dominant, and today's investments may or may not meet tomorrow's expectations? In general, the fantastic growth of the asset management industry and its high profit margins occurred in the world of DB pension plans, total return targets, and strong equity markets. Below are snapshots of strategies firms may consider in facing the future.

- **Move into the unconventional strategies that are lumped together in alternative investments**—private equity, hedge funds, commodities, and real estate, among others. As institutional investors—primarily DB plans and endowments—seek diversification and enhanced returns, assets have been pouring into alternative investments, and generally, into the niche companies that offer these products. While DB plans are declining in growth, assets are still substantial, and for investment firms, alternatives have higher margins (on the declining business). Many traditional asset managers have moved to build or buy these capabilities. Of course, questions still remain as to which alternative strategies can be scaled up to meet institutional demand, and in which strategies returns will be dampened with increased assets. Despite these open questions, JP Morgan, Legg Mason, Morgan Stanley, and many others have acquired hedge fund or fund-of-funds firms, while others, like State Street Global Advisors, have built up alternative strategies internally.

- **Offer investment products to DC plan participants.** Buy, create or sub-advice mutual funds or exchange-traded funds (ETFs) for open-architecture retail or 401(k) platforms. While firms like Wellington or Primecap only manage institutional money—and the DB business is in decline—sub-advising mutual funds ensures access to the growing 401(k) market without a heavy investment in reporting or retail client service infrastructure.

- **Create or buy more income-related investment products (as retirees seek income rather than asset growth).** Variable annuities have a tarnished reputation among many retail investors, but new products that can pay a steady stream of income to retirees will grow in importance in a way even non-insurance companies will want to pay attention to.

- **Leave the asset management business altogether, and focus on offering more professional advice to retirees and wealthy individuals.** Witness Citigroup and Merrill Lynch selling their asset management “manufacturing” capabilities to Legg Mason and BlackRock, respectively, so they can focus on asset management distribution. This is the distinction between selling, or distribution, and manufacturing.

- **Continue to offer the same set of traditional equity and fixed-income products.** Some firms will be able to do this really well, such as Southeastern Asset Management, Brandes, Primecap, and Dodge & Cox.

Of course, these are not the only opportunities, but they appear to be promising. Each of the above moves has a host of potential challenges and costs. Given the changing landscape the clients of investment management firms face, these are the uncertainties and strategies that managers (and MBAs interested in asset management) will continue to grapple with.

Ryan Randolph is a second-year MBA student at the BC Carroll School. Upon graduating from Colgate, Ryan worked at Greenwich Associates for 8 years in the investment management practice. Ryan is pursuing a career in the investment management industry. He can be reached for comment at ryan.randolph.1@bc.edu.
Magazines and Online Resources

There are many magazines or trade publications that both institutional investors and their investment managers use, outside of the Wall Street Journal and Financial Times. The websites these magazines run are often the best place to begin looking for the latest industry news. In the U.S., the most popular periodicals are

- Pensions & Investments (www.pionline). P&I also publishes lists of the largest asset managers and pension funds in the U.S.,
- Plan Sponsor (www.plansponsor.com). Plansponsor.com has a free daily e-mail,
- Institutional Investor (www.iinews.com/), and
- Fundfire (www.fundfire.com).

Europe and the U.K. are home to publications with flashy titles such as

- Pensions,
- European Pensions & Investments, and
- Pensions & Investments Europe (IPE). IPE also has a free daily e-mail.

There are also a host of specific magazines and newsletters related to hedge funds and private equity. One of these, Albourne Village (http://village.albourne.com/) has a free daily e-mail service.

Other Sources of Data on Pensions and Investment Management

Imagine that your boss asked you to do a full analysis of the asset management industry. Where would you get data on market size by segment and the main competitors? Here are some leads:

- OECD. The Organization for Economic Co-operation and Development has conducted a lot of research on the impact of aging demographics and pensions (www.oecd.org). The International Monetary Fund (IMF) or World Bank may also periodically release information related to pensions and aging.
- ICI. The Investment Company Institute is the mutual fund lobby group—and has good data on the fund industry (www.ici.org).
- EBRI. The Employee Benefit Research Institute has good information on the number and size of DB and DC plans. It also has good research on health care funding. (www.ebri.org).
- MMD. The Money Market Directory is published by Standard and Poors, and lists all U.S. pension funds and endowments with contact information, asset allocation, and managers used (where disclosed). It is available in huge green books (maroon for endowments) or electronically. Most marketing and client service personnel at buy side asset managers are familiar with this publication.
- In Europe, AP Information Services publishes MMD-type directories. Pension Funds and Their Advisers focuses on U.K. pension funds, and International Pension Funds and Their Advisors has global listings—with updates on pensions systems in each market (www.apinfo.co.uk/directories/).
- In Canada, Benefits Canada provides similar information on pension funds, with aggregated statistics.
- In Japan, the PFA, or Pension Fund Association, collects statistics from all of their plans, but this information may not be widely available (nor is it in English).
- Nelson’s Guides. A division of Thomson Financial, the Nelson’s Guides have versions with listings and contact information for buy-side analysts, plan sponsors, investment consultants, and investment managers. The investment manager guide is a very good tool for buy-side job seekers.
- Investment consultants. The investment consultant community often publishes white papers, for clients and prospective clients, that they post on their websites. They also often publish research on industry trends. Watson Wyatt, Mercer Investment Consulting, and Hewitt Associates (on 401k investment trends) often have good research and statistics.
- Commonfund and NACUBO. While we did not touch on endowments and foundations much in this issue, they are important institutions with over $600 billion in assets. The National Association of College and University Business Officers (NACUBO) conducts research on endowments and foundations, on investment returns, asset allocation, and spending rates.
- Industry Consultants. Greenwich Associates, Cerulli Associates, and Financial Research Corporation have different business models, but all collect information on the asset management industry.
- Investment Managers and Investment Banks. These firms are in the industry, and often publish a lot of information of interest to their clients. One might suggest that information published by sell-side analysts is used to get asset managers to think about M&A transactions. A few sources of publicly available articles on the challenges plan sponsors face (and resulting solutions) are from SSgA, AllianceBernstein Institutional, and Grantham, Mayo, Van Otterloo, among many others.
As with any industry, institutional investment management has its share of trade publications that practitioners keep up with. Below is a suggested short list of books, journals, magazines, and websites. Many of these books are accessible (not too technical), requiring only a basic knowledge of investments.

**Coming Up Short: The Challenge Of 401(k) Plans**
by Alicia Haydock Munnell and Annika Sunden
Amazon price: $22.95 Paperback: 210 pages
*Coming Up Short* analyzes the benefits and major drawbacks of defined contribution plans, and proposes various reforms to ensure that the aging population will have adequate retirement income. One of the authors, Alicia H. Munnell, is the director of the Boston College Center for Retirement Research.

**Restructuring Retirement Risks**
by David Blitzstein, Olivia S. Mitchell and Stephen P. Utkus
Amazon price: $85 Hardcover: 270 pages
Out of the Pension Research Council at Wharton, this book is a volume of articles on the various aspects of retirement systems. The book discusses the risks and rewards of retirement in three areas, “First, it formulates new perspectives for assessing retirement risks and rewards. Second, it evaluates efforts to insure retirement plans (the PBGC). Third, it proposes several new strategies for managing retirement system risk.”

**Investments**
by Zvi Bodie, Alex Kane, and Alan J. Marcus
Co-written by Boston College’s own Professor Alan J. Marcus as well as Boston University professor Zvi Bodie, this latest edition is the place to start to understand all about investments.

**Bold Thinking on Investment Management: The FAJ 60th Anniversary Anthology**, edited by Rodney Sullivan, CFA
Amazon price: $39.95 Hardcover: 320 pages

**Unconventional Success: A Fundamental Approach to Personal Investment**
by David F. Swensen
Amazon price: $18.15 Hardcover: 416 pages
In his follow-up to *Pioneering Portfolio Management: An Unconventional Approach to Institutional Investment* which detailed how the Yale Endowment approached investment management, Yale Endowment CIO David Swensen brings us a highly critical, but easy to read, analysis of the mutual fund industry while providing individual investors insights on how to approach personal investing.

**Winning the Loser’s Game**
by Charles D. Ellis
Amazon price: $16.47 Hardcover: 182 pages
This book is considered a “classic” for investors at any level — and very easy to read. The book was initially intended for institutional investors thinking about investment policy and allocating assets to managers, but over time, later versions have focused on the individual. The general premise is that active investment management is more often than not a loser’s game, and that passive investment management helps investors win in the market.

**Pension Fund Excellence: Creating Value for Stakeholders**
by Keith P. Ambachtsheer and D. Don Ezra
Amazon price: $40.92 Hardcover: 256 pages
Keith Ambachtsheer and Don Ezra provide consulting to pension funds globally. In this book, they outline how pension funds should run themselves as an effective business unit, and illustrate their ideas with case studies from pension funds around the globe. Also, keep an eye out for Mr. Ambachtsheer’s new book *Pension Revolution: A Solution to the Pensions Crisis.*

**The Oxford Handbook of Pensions and Retirement Income**
by Alicia Haydock Munnell, Gordon L. Clark, and J. Michael Orszag
Amazon price: $121.60 Hardcover: 936 pages
This handbook compiles up-to-date research, tools, and methods related to pension and retirement income. The book has over forty articles from experts across different fields, and discusses the implications of changing demographics, globalization and other issues on the future of retirement provision. One of the editors, Alicia H. Munnell, is the director of the Boston College Center for Retirement Research.

**Journals**
A portfolio manager recently told us that academic research and journals are too often ignored by his peers in money management. With all of the publications above and the academic research on efficient markets, it is easy to see why. A few of these include
- *Financial Analyst Journal*, published by CFA Institute, and