Who Should Buy a Nonqualified Tax-deferred Annuity?

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Abstract

This study describes the structure of nonqualified tax-deferred annuities and examines when they are in the best interest of individual investors as savings vehicles. It concludes that, unless they are concerned about creditor protection, few individuals should consider saving in an annuity. Those few must decide between an annuity and a mutual fund held in a taxable account. In general, young investors with long investment horizons should consider annuities. Costs are a critical factor, however. Most annuities have high costs compared to mutual funds. This study concludes that investors fare better with either low-cost annuities or low-cost mutual funds. © 2002 Academy of Financial Services. All rights reserved.

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1. Introduction

What is a nonqualified tax-deferred annuity? Who should buy one? The goal of this paper is to provide a rigorous framework to answer these questions *from the investor's perspective*. As explained later, most nonqualified annuities have high costs that make them unfavorable for savings purposes. Yet, low-cost annuities could be good choices for certain investors. With no single answer to the question of who should buy an annuity, this paper provides the investor an analysis of the issues.

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Part A.

Part B.

Fig. 1. The distinction between investments and savings vehicles.
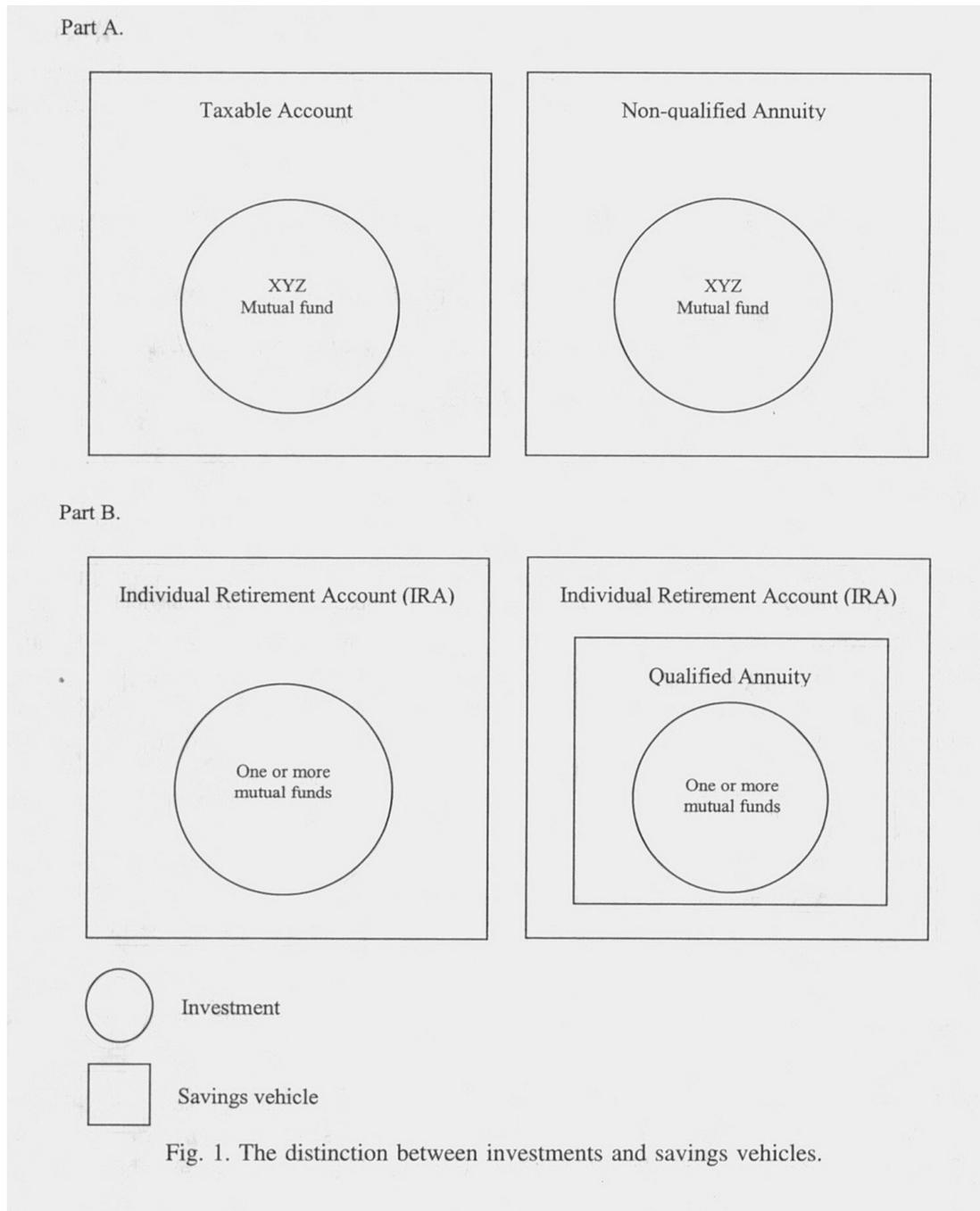
The short answer to the first question is a nonqualified annuity is a savings vehicle. Investments in this vehicle are not deductible from income in the contribution year, but returns accumulate tax deferred until withdrawal at which time they are taxable at ordinary income tax rates. The annuity is not the investment. Part A of Fig. 1 illustrates the distinction. Someone decides to invest in the XYZ mutual fund. The mutual fund is the investment. Also, he must choose the savings vehicle. For now, assume he is deciding between two savings vehicles: a taxable account or a nonqualified tax-deferred annuity. If the mutual fund is held in a taxable account, he pays taxes each year on distributions. If held in an annuity, the returns accumulate tax deferred. Obviously, the tax-deferral feature favors the annuity. But,

with few exceptions, annuities have higher expenses than taxable accounts; the total annual expense ratio averages about 0.7% higher on an annuity than on a mutual fund held in a taxable account. A key question addressed in this study is when are the benefits of tax deferral worth the annuity's generally higher costs.

The longer answer to the first question is a nonqualified annuity is a complex insurance product. It is a savings vehicle with its own set of tax rules and other legal requirements. Inside this legal structure, an individual can invest in stock funds, bonds funds, balanced funds, and other mutual funds. (Technically, mutual funds held inside an annuity are called subaccounts. Since they are functionally identical to mutual funds, they are called mutual funds in this study.) Since an annuity includes an insurance feature, it must be sold through an insurance company.

The second question is, "Who should buy a nonqualified annuity?" Some people should be interested in a nonqualified annuity for its investment feature—that is, tax-deferred growth—and others for its creditor-protection feature. In some states, an annuity provides protection from creditors. Thus a medical doctor may prefer to save in an annuity instead of a taxable account. What about individuals who are not concerned about creditor protection? They should invest in the best savings vehicle for acquiring after-tax wealth.

Fig. 2 illustrates this decision for our hypothetical investor, who is not concerned about creditor protection. She must first decide whether she is saving to meet preretirement needs or postretirement needs. If she is saving to meet preretirement needs such as the purchase of a car or unexpected expense then she generally should save in a taxable account. All other savings vehicles are called retirement savings vehicles. Because withdrawals from them before age 59.5 are generally subject to a 10% penalty tax, they are generally inappropriate for someone saving for preretirement needs.

If she is saving for postretirement needs, she can invest in any of four savings vehicles— taxable account, annuity, Roth IRA, or deductible pension. A deductible pension is any savings vehicle where the investment amount is deductible in the contribution year, returns accrue tax deferred, and withdrawals are taxed at ordinary income-tax rates. Examples include 401(k), 403(b), 457, Keogh, SEP-IRA, and deductible IRA. We show that the Roth IRA and the deductible pension are much more tax-favored savings vehicles than the other two for accumulating retirement wealth. She should first fully fund Roth IRAs and deductible pensions. Then, if she wants to save additional funds for retirement, she should decide between saving in an annuity or a taxable account. Due to the 2001 Tax Act, this decision should apply to few individuals.

We examine in detail the decision to save in an annuity or a taxable account. This decision depends critically upon the comparison. This study considers average-cost and low-cost annuities and, not only average-cost and low-cost mutual funds, but also tax-inefficient and tax-efficient mutual funds. The first conclusion to emerge from this analysis is that costs matter a great deal. Knowledgeable investors should only consider buying a low-cost nonqualified annuity or a low-cost mutual fund. In general, a low-cost annuity makes sense for individuals concerned about protection from creditors and individuals with long investment horizons. Some individuals want to invest in bond funds. Assuming gross bond returns of 5.5% and 25% tax brackets before and during retirement, the low-cost annuity should be

Question 1. Is the investor saving to meet pre-retirement needs?

Yes	No

She should save in a taxable account. Withdrawals before age 59 ½ from a non-qualified annuity, Roth IRA, or deductible pension are usually subject to a 10% penalty tax.

Go to Question 2.

Question 2. The investor is saving to meet post-retirement needs and she is not concerned about protection from creditors. Which savings vehicles are best?

Top Choices

Roth IRAs and Deductible Pensions

Secondary Choices

Taxable Accounts Non-qualified Annuities

Roth IRAs and deductible pensions are best for accumulating retirement wealth. She should first fully fund these two savings vehicles. Go to Question 3.

Question 3. The investor has fully funded Roth IRAs and deductible pensions and wishes to invest additional funds to meet her post-retirement needs. Should she save in taxable accounts or non-qualified annuities?

Taxable Accounts	Non-qualified Annuities

This decision is examined in this study.

Fig. 2. The investor's decisions.

preferred by individuals with horizons exceeding 17 years. The breakeven period is less than 10 years if returns average 8% or the investor is in a 33% tax bracket before retirement and 25% bracket during retirement. Other individuals want to invest in stock funds. The analysis implies that a *passive*, low-cost stock fund always provides a larger ending wealth than a low-cost annuity. However, most individuals actively manage their stock portfolio or select an active stock fund. Assuming 8% gross stock returns and 25% tax brackets before and during retirement, the breakeven period for the low-cost annuity compared to a low-cost active stock fund is 15 years. The breakeven period is 8 years if gross returns average 12%. The big loser in the analysis is the insurance industry's staple—annuities with expenses around 2%. These products are not in the best interest of investors.

Section 2 explains why few individuals should have to make the decision to save in a nonqualified annuity or a mutual fund held in a taxable account. Section 3 presents the analysis for the relatively few people who should decide between saving in an annuity or a mutual fund held in a taxable account. Section 4 presents the incentive structures that explain why annuities are usually pushed by commission-based professionals and discouraged by fee-only professionals. Section 5 presents a summary.

2. Terminology, tax structures, and more

2.1. Terminology

The three major retirement markets for tax-deferred annuities are (1) employer-sponsored markets such as 403(b), SEP-IRA, Keogh, and 401(k) plans; (2) direct IRA rollovers; and (3) nonqualified markets. In a nonqualified annuity, the original investment is not deductible. The other two markets deal with qualified annuities, which means the original investment contributions are tax deferred.

In the first two, the annuity provides redundant tax deferral. For example, Part B of Fig. 1 illustrates a qualified annuity held in a direct IRA rollover. Someone recently retired and wants to rollover his $1 million in 401(k) funds into a traditional IRA. In the left-hand picture of Part B, he rolls the $1 million into an IRA. Inside the IRA, he selects one or more mutual funds. Since held in a traditional IRA, returns on the mutual funds are tax deferred. In the right-hand picture, he rolls the $1 million into an IRA. Inside the IRA, he buys a qualified annuity. Inside the annuity, he selects one or more mutual funds. Because the IRA already provides tax deferral, the annuity's higher costs cannot be justified as the cost of providing tax-deferred growth. It is difficult to justify placing an annuity inside a qualified plan. In fact, there are currently multiple class-action lawsuits against firms that sold annuities inside qualified plans. See Geer (1998) and Panko (2000).

2.2. Tax structures

This section presents models of the tax structures facing investments in taxable accounts, Roth IRAs, deductible pensions, and nonqualified annuities. The individual invests $1 of after-tax funds this year. We begin with the same investment of after-tax funds so we hold constant the investor's level of consumption this year. She withdraws the funds after n years. The models compare the after-tax values of the original investment after n years in each savings vehicle. For additional details see Reichenstein (1999b, 2000a).

The individual decides whether to invest in bonds or stocks. If she invests in bonds, the after-tax value after n years is: $\$1[1 + i(1 - t)]^n$. The funds grow at i percentage per year before taxes and at $i(1 - t)$ after taxes, where t is the ordinary income tax rate. Suppose she invests in stocks that pay i percentage per year consisting of d percentage dividends plus short-term capital gains and cg percentage long-term capital gains that are realized in 1 year and 1 day. We later relax this assumption. The after-tax value after n years is: $\$1[1 + d(1 - t) + cg(1 - t_c)]^n$, where t_c is the capital gain tax rate. The tax structures are different for bond funds and stock funds held in a taxable account. In contrast, the other savings vehicles have the same tax structure whether the investment is a bond fund or a stock fund.

If she saves in a Roth IRA, the after-tax value after n years is: $\$1(1 + i)^n$. In a Roth, returns are tax-exempt if held for at least 5 years and withdrawn after age 59.5. For someone saving for retirement, these two qualifications are almost always met.

The next savings vehicle is a deductible pension such as 401(k) or Keogh. Assuming the employer does not match the contribution, the after-tax value after n years is: $\$1([1/(1 - t)] (1 + i)^n (1 - t_n))$ or $\$1[(1 - t_n)/(1 - t)] (1 + i)^n$. If she saves in a deductible pension, she

would be able to invest $1/(1 - t)$ of pretax funds, which is the equivalent of $1 of after-tax funds. Because the $1/(1 - t)$ contribution is deductible this year, the net result is a reduction in this year's spending of $1, the same as the other savings vehicles. The $1/(1 - t)$ grows tax deferred for n years, and is fully taxable at the ordinary income-tax rate during retirement, t_n. When the tax rates in the contribution year and withdrawal years are the same, this simplifies to $1(1 + i)^n$, which is the same as the Roth IRA.

Employers sometimes match or partially match employee contributions to deductible pensions. If the employer matches employee contributions dollar-for-dollar, the after-tax value after n years is: $1[(2(1 - t_n)/(1 - t)](1 + i)^n$. Due to the match, she begins with twice as many dollars and ends with twice as many dollars after taxes.

The fourth savings vehicle is a nonqualified tax-deferred annuity. The after-tax value is: $1[(1 + i)^n - t_n\{(1 + i)^n - 1\}]$. The individual invests after-tax funds, they grow tax deferred, and, upon withdrawal, deferred returns are taxed at the ordinary income tax rate during retirement, t_n. The amount in braces is deferred return; the original $1 investment is tax-free. In this tax model, i is the rate of return that the investor receives. This rate is usually lower in an annuity than in other savings vehicles due to the annuity's higher costs.

To put these models in perspective, it is useful to insert reasonable numbers. Assume an 8% pretax rate of return, consisting of 1% dividend yield plus 7% capital gain, and 15-year investment horizon. Set the ordinary income tax rates before and during retirement at 28%, the capital gain tax rate at 20%, and assume there is no matching contribution. For a stock investment, the after-tax values are $3.17 for Roth IRA and deductible pension, $2.56 for nonqualified annuity, and $2.51 for taxable account.

These numbers illustrate the points of this section. Returns in a Roth IRA and deductible pension are generally tax-exempt or better, whereas returns in taxable accounts and annuities are taxable; returns in an annuity are tax deferred, but eventually taxable. When saving for retirement, the Tax Code treats savings in Roth IRAs and deductible pensions much more favorably than savings in taxable accounts and annuities. Therefore, when saving for retirement, individuals (who are not worried about creditor protection) should save all they are allowed to save (or all they can afford to save) in Roth IRAs and deductible pensions before they save in either taxable accounts or nonqualified tax-deferred annuities.

2.3. Importance of the 2001 Tax Act

The Economic Growth and Tax Relief Reconciliation Act of 2001 (henceforth, Tax Act) significantly increased the opportunities for individuals to invest funds more tax-efficiently than in a nonqualified annuity. To repeat, funds in Roth IRAs and deductible pensions are taxed more favorably than funds in annuities. In addition, funds in 529 plans and Coverdell Education IRAs are taxed more favorably than funds in annuities. Consequently, it is important to note how the Tax Act affects contribution limits to retirement accounts and education accounts.

The Tax Act increases the annual Roth IRA contribution limit from $2,000 in 2001 to $5,000 in 2008. Thereafter, the limit will be indexed to inflation. Beginning in 2002, a special catch-up provision allows larger contributions for people age 50 or older. A similar story applies to most deductible pensions. By 2006, the maximum contribution rises to $15,000 in

401(k), 403(b), and 457 plans and to $10,000 in SIMPLE plans. Beginning in 2002, 401(k), 403(b), and SIMPLE plans allow larger catch-up contributions to people age 50 and older, and contributions limits are indexed to inflation after 2006.

To put these numbers in perspective, consider a married couple, both age 50 by 2008. They have 401(k) plans and qualify for Roth IRA contributions. In 2008, they could each contribute $20,000 to a 401(k)—regular contribution of $15,000 plus $5,000 catch up—plus $6,000 to a Roth IRA—regular contribution of $5,000 plus $1,000 catch up. As a couple, they could invest up to $52,000 in these most-favored savings vehicles.

The Tax Act provides for tax-exempt returns inside 529 plans and Education IRAs if used for qualified education needs. After funding their Roth IRAs and deductible pensions, many parents would prefer to invest tax-exempt for their children's education before saving in a taxable account or annuity. The maximum contribution to Education IRAs is $2,000 per child. By accelerating 5 years of annual gifts into 1 year, each parent could contribute up to $55,000 to each child's 529 plan.

2.4. Creditor protection across savings vehicles

There are differences in levels of creditor protection across savings vehicles. Funds in most deductible pensions offer the best protection; ERISA-qualified and profit-sharing plans are protected from creditors (see Patterson v. Shumate, 1992). Taxable accounts are not protected. The level of protection provided by IRAs and annuities varies by state, and is addressed later.

2.5. Conclusion

To summarize the conclusions thus far, if someone is saving for preretirement income needs, the nonqualified annuity is not an appropriate savings vehicle. If saving for retirement income needs, with few exceptions individuals should save all they can in Roth IRAs and deductible pensions before considering an annuity. An exception applies to individuals who need creditor protection, since annuities receive strong creditor protection in some states. Because the new tax law substantially increases the amount of funds that can be invested in deductible pensions and Roth IRAs, few individuals should consider nonqualified annuities. Of those few, some will prefer to save tax-exempt in 529 plans and Education IRAs for children's education before saving in an annuity. After fully funding deductible pensions and Roth IRAs, someone wanting to save additional funds for retirement should decide between saving in a nonqualified annuity and a taxable account. We examine this decision in the next section.

3. Nonqualified annuity or mutual fund held in taxable account?

3.1. Comparing features of annuities and taxable accounts

Table 1 presents factors that should influence the decision to save for retirement in nonqualified annuities (henceforth, annuities) or taxable accounts. The annuity has one major

Table 1
Factors affecting the decision to save through a nonqualified annuity or a taxable account

Major factors	Annuity	Taxable account
Tax-deferred growth	Yes	No
Costs	Higher	Lower
Preferential capital gain tax	No	Usually
Other factors		
Liquidity		
10% early withdrawal penalty tax rate	Usually	No
Insurance co. — surrender penalty	Usually	No
Stepped-up basis	No	Yes
Death benefit	Yes	No
Option to harvest losses	No	Yes
Protection from creditors, including lawsuits	Sometimes	No

advantage and up to two major disadvantages. The advantage is the ability to grow tax deferred. One disadvantage is its typically higher costs. The second disadvantage, which applies if the investor wants an underlying stock exposure, is that capital gains are eventually taxed at the ordinary income tax rate. In a taxable account, capital gains are usually taxed at preferential rates.

Table 1 also lists other factors that should influence the decision. Liquidity favors the taxable accounts. Withdrawals from an annuity before age 59.5 are generally subject to a 10% penalty tax. In addition, the insurance firm usually imposes a surrender penalty. A typical surrender fee is 6% if liquidated in the first year with the fee decreasing 1% per year.

The next three factors are step-up in basis, death benefit, and real option to harvest losses. The first and third favor taxable accounts, while the death benefit favors annuities. Assets held in a taxable account receive a stepped-up basis at date of death. Suppose a spouse and spouse jointly own 100 shares of Microsoft purchased at $20 per share. In a community property state, the full property value receives a step-up in basis at the death of the first. For example, in Texas, a community property state, if the spouse dies when the stock is selling at $70 per share the surviving spouse's cost basis rises to $7,000. So, she could sell the 100 shares for $7,000 without incurring a capital gain tax. In a common law state, like Iowa, the step-up applies to half the property value. In the prior example, the spouse's cost basis rises to $4,500 at her spouse's death. Beginning in 2010 the step-up in basis for the surviving spouse will be limited to $4.3 million. Investments do not receive the step-up in basis when held in any retirement account including an annuity.

The annuity offers a death benefit that is unique to this savings vehicle. This benefit makes the annuity an insurance product, and thus it can only be sold through an insurance firm. There are several types of death benefits. Accumulated-Value Death Benefit merely says the beneficiary receives the value of the contract at death. It has no insurance value. Guaranteed Minimum Death Benefit promises that upon the investor's involuntary death the beneficiary will receive the larger of the ending investment value or the original investment amount (reduced for subsequent withdrawals). A roll-up type of death benefit guarantees that the

account value will increase by at least some minimum guaranteed rate for a limited number of years. If the guaranteed rate is 5% then, at death, the beneficiary receives the larger of the ending account value or the original investment amount accrued at 5% a year (up to twice the original investment amount); the 5% guarantee lasts until the floor value is twice the original investment amount or for about 14 years in this example. However, any death benefit other than account value typically ends at age 75 or 80. Finally, a step-up type of death benefit is based on a highest anniversary account value. If someone invests $40,000 on January 10, 2001, the contract may call for the minimum floor value to be reset at the higher of $40,000 or the value on January 10, 2006. In January 2011, the floor is reset at the higher of the floor in January 2006 or the value in January 2011.

Consider the value of the Guaranteed Minimum Death Benefit to a 50-year-old male. It pays off if he dies *and* the value of the investments decreases. His annuity account—that is, the portfolio of mutual funds in Part B of Fig. 1—may consist of (1) only a money market fund; (2) only a high-grade bond fund; (3) only a stock fund; or (4) a combination of money, bond, and stock funds. If it consists of only a money fund, the guarantee has no value, because money funds do not lose money. If it consists of only high-grade bond funds, the death benefit has little value because there is little chance that he will die within a few years *and* high-grade bond funds will experience a loss. If it consists of a portfolio of money, bond, and stock funds, the death benefit has little value because the annuity contract only insures the value of the entire portfolio, and not each mutual fund; thus if one stock fund in the annuity portfolio loses $5,000 but all other funds collectively earn at least $5,000, there is no payout from the insurance company. The death benefit has its highest value when the annuity portfolio consists of one stock fund. Milevsky and Posner (2001) estimate the fair insurance value of the death benefit when the annuity portfolio consists of one stock fund. Their value estimates are too high for most annuity buyers because most of their annuity portfolios do not consist of a single stock fund.

Milevsky and Posner estimate the values of two types of death benefits: Guaranteed Minimum Death Benefit and roll-up with 5% guaranteed interest rate. They estimate that GMDB and roll-up type death benefits are worth, respectively, 0.087% or less and 0.375% or less for individuals age 60 or less. They are more valuable if the individual is older than 60. How does this compare to average Mortality & Expense (M&E) fees? In September 1999, the average M&E fee was 1.04% for annuity contracts with a GMDB. Perhaps more damning, they conclude M&E fees are not priced to reflect mortality risk—that is, fees do not vary with age, sex, and volatility of underlying asset. In short, M&E fees do not vary with the value of the death benefit, and the additional costs of annuities far exceed the fair insurance value of the death benefit.

Milevsky and Panyagometh (2001) examine the role of return uncertainty on the choice between an annuity and a mutual fund held in a taxable account. The investor in a mutual fund held in a taxable account has the option to harvest losses; if the account value declines, the investor can recognize the loss, which effectively creates a tax refund. This option is not available on an annuity. They conclude that this option, which is not considered in this study, lengthens the breakeven period—that is, the length of time before the annuity's tax-deferral benefit offsets its cost disadvantage.

The last factor is protection from creditors. Assets in mutual funds held in taxable

accounts are not protected. Depending upon the state, assets in an annuity are sometimes protected. Based on Rothschild and Rubin (1999), some 32 states and the District of Columbia appear to provide no protection or limited creditor protection to annuities, while 18 states provide strong protection. Of those providing limited protection, six states protect proceeds of annuity policies only to the extent they are necessary of the reasonable support of debtor and dependents. Fifteen states and D.C. place dollar limits on assets exempt from creditors; most exempt a monthly total with a frequent exemption amount being $350 per month under all annuity contracts, while others have a maximum total-dollar exemption of say $10,000. Eleven states provide no creditor protection or protection that is limited to one or more sections of the Tax Code such as 408 that applies to IRAs. Of the 18 that appear to provide strong protection, two limit protection on contributions made shortly before filing bankruptcy. Also, see Fair (1993) and Spero (2001).

"Guaranteed lifetime income" is often considered an annuity benefit. It is not listed in the table because it is not unique to the annuity. The investor could save in a taxable account and, at retirement, cash it in and buy an immediate annuity with a lifetime income guarantee. Cashing in the taxable account may have tax consequences. Nevertheless, both savings vehicles provide the option of a lifetime income guarantee.

Because annuities are designed for someone saving for postretirement needs, their liquidity impairments should seldom come into play. The stepped-up basis and real option to harvest losses favor the taxable account, while the death benefit and protection from creditors favor the annuity. These factors are at least partially offsetting. Most individuals should choose between an annuity and taxable account based on these savings vehicles' abilities to provide after-tax wealth. The analysis that follows is for these individuals. Therefore, it concentrates on the three major factors.

3.2. Accumulation and distribution phases

Annuitization is a unique feature of the distribution phase. When an annuity is annuitized, it is exchanged for a guaranteed monthly income for the rest of the contract owner's life or, more commonly, the rest of the contract owner and his or her spouse's lives. At the death of the last to survive, the investment usually has no remaining value. A major benefit of annuitization is the guarantee that you will never run out of money. This topic is beyond the scope of this article, but it is addressed in Ameriks et al. (2001).

Some 98% of individuals who invest in nonqualified annuities do **not** annuitize (see Sondergeld, 1997, and Hube, 1998). These individuals decide when, and how much, to withdraw from the annuity each month. Once annuitized, individuals have no control over the amount of funds that can be withdrawn each month. Few investors appear willing to give up that control. When it is not annuitized and funds remain after death, they are bequeathed to spouse, children, or whomever. The 98% of annuity buyers who do not annuitize are only interested in the annuity's accumulation feature—tax-deferred growth. The remaining 2% are interested in both its accumulation feature—tax-deferred growth—and in its distribution feature—annuitization. The comparison in this study assumes the annuity is not annuitized.

Table 2
Average costs of variable annuities and mutual funds held in taxable accounts

	Variable annuity		Mutual fund	
	Bonds	Stocks	Bonds	Stocks
Fund expense	0.69%	0.79%	1.12%	1.43%
Insurance expense	1.31%	1.31%	NA	NA
Total expense	2.00%	2.10%	1.12%	1.43%
Contract charge	$26	$26	NA	NA
Front-load	0.05%	0.10%	1.44%	1.73%
Deferred load	6.29% cont.[a]	6.27% cont.	1.01%	1.12%

[a] Cont. denotes a load that is contingent upon the time between investment and withdrawal of funds. For annuities, the bond fund sample consists of mutual funds in all variable annuities, except qualified-only annuities, with a fixed-income Morningstar Category and net assets of at least $25 million. The minimum size constraint eliminates funds with few assets but does not appreciably affect average costs. The stock fund sample consists of mutual funds in all variable annuities, except qualified-only annuities, with a domestic stock or international stock Morningstar Category and net assets of at least $50 million. For taxable accounts, the mutual fund samples correspond to the annuity samples. The bond fund sample consists of all funds with Morningstar Category of taxable bonds that are not restricted to institutions or closed to new investments and have net assets of at least $25 million. The stock fund sample is similar except that it includes domestic and international stock funds and has a $50 million size restriction. Sources: January 2001 versions of Morningstar's Principia Pro for Variable Annuities/Life and Principia Pro for Mutual Funds.

3.3. Cost structures

Table 2 presents average expenses on annuities and mutual funds held in taxable accounts. For annuities, Fund Expense denotes the annual expense ratio on the underlying mutual funds. Insurance Expense is the sum of M&E fee plus all other administrative and distribution expenses. Annuities' Total Expense averages 2.00% a year on bond funds and 2.10% a year on stock funds. In addition, annuities impose an annual fixed-dollar contract charge on 86% of bond funds that averages $26 per year across all bond funds. The same percentage and average cost apply to stock funds. Only 2% to 3% of annuities charge a front load, but over 90% have a contingent surrender fee. Annuities typically allow penalty-free withdrawals of up to 10% of principal each year. Withdrawals beyond this amount are subject to the surrender fee. As discussed later, the surrender fee (and not the front load) is associated with the size of the annuity salesman's commission.

For mutual funds held in taxable accounts, the annual expense ratio averages 1.12% on bond funds and 1.43% on stock funds. Mutual funds do not charge an annual contract fee. Some 63% of mutual funds do not have a front-end load, but it averages 1.44% on all bond funds and 1.73% on all stock funds. Some 68% of mutual funds do not have a deferred load, but it averages a little over 1% on all funds.

This study assumes the following cost structures. An average-cost annuity has a 2% total expense ratio when the underlying asset is a bond fund and a 2.1% expense ratio when the asset is a stock fund. In addition, each has a contract charge of $26 a year. A low-cost annuity has a 0.6% expense ratio and no annual contract charge. In the January 2001 version of Morningstar's Principia Pro for Variable Annuities/Life, the nine lowest-cost mutual funds

in nonqualified annuities have an average expense ratio of 0.61%. They include funds across investment styles: intermediate- and short-term bond funds, large-cap blend, large-cap value, large-cap growth, midcap stock funds and balanced funds. By intent, this study's low-cost annuity reflects the opportunities that are available to knowledgeable investors. The average-cost bond mutual fund has a 1.1% expense ratio, a 1.4% front-end load, and a 1% deferred load. The average-cost active stock fund has a 1.4% expense ratio, a 1.7% front-end load, and a 1.1% deferred load. Low-cost bond and stock funds have 0.30% expense ratios and no loads. The low-cost active stock fund realizes all capital gains after 1 year and 1 day, while the passive stock fund realizes 5% of capital gains each year. Cost structures are remarkably stable at annuities and mutual funds. Thus an average-cost or a low-cost alternative will likely remain, respectively, average cost or low cost.

The analysis assumes that 1% higher costs reduce net returns—the returns that investors receive—by 1%. In addition, it assumes there is no relationship between turnover ratio and net return. For bond funds, Blake et al. (1993), Reichenstein (1999a), and Domian and Reichenstein (2002) conclude that each 1% of expense reduces net returns by, on average, about 1%. For stock funds, Bogle (1998), and Peterson et al. (2001) conclude that each 1% of expense reduces net returns by, respectively, 1.30% and 1.15%.

3.4. Comparing retirement incomes

The investor has already saved all she is allowed to save in Roth IRAs and deductible pensions. She invests $40,000 of additional funds in a nonqualified tax-deferred annuity or a mutual fund held in a taxable account, which, according to LIMRA International (1999), is about the size of the average nonqualified annuity. The underlying asset can be a bond fund or a stock fund. The bond fund can be held in one of four savings vehicles: average-cost annuity, low-cost annuity, average-cost bond fund, or low-cost bond fund. The stock fund can be held in one of five savings vehicles: average-cost annuity, low-cost annuity, average-cost active stock fund, low-cost active stock fund, or low-cost passive stock fund.

Gross bond returns average 5.5% or 8%. Current yields to maturity (January 10, 2002) on 5-, 10-, and 30-year Treasury securities are 4.20%, 4.95%, and 5.40%. Therefore, for the next decade, returns on the benchmark 10-year Treasury should be about 5%. Corporate bond returns will probably be a bit higher, perhaps 5.5%. Gross stock returns average 8% or 12%. Due to today's lofty stock market multiples, Arnott and Ryan (2001), Brown (2000), Fama and French (2001), Jagannathan et al. (2000), Siegel (1999), and Shiller (2000) conclude that long-horizon stock returns will likely average 8% or less. The 12% exceeds the historic average return on the S&P 500 since 1926.

The analysis considers two sets of tax rates. In the first set, the ordinary income tax rate is 25% both before and during retirement. In the second set, it falls from 33% before retirement to 25% after retirement. This set is appropriate for individuals in high tax brackets before retirement. Due to the 2001 Tax Act, people with real incomes subject to the 28% marginal tax bracket in 2000 will be in the 25% bracket by 2006. In both sets, they pay taxes at 20% on realized capital gains held more than 1 year but less than 5 years and at 18% on realized gains held more than 5 years. These capital gain tax rates are the current rates and apply before and during retirement.

Bond interest is tax deferred in annuities and taxed each year in taxable accounts. Stock returns are tax deferred in annuities. The tax treatment of stock returns in taxable accounts is more complex. For the two active stock funds, we assume 2% of each year's gross return is dividends plus short-term capital gains that are taxed at the ordinary income tax rate and the remainder is capital gains that are realized in 1 year and 1 day and taxed at 20%. If gross stock returns are 8%, each year the average-cost active stock fund distributes net income of 0.6%—the 2% less 1.4% expense ratio—and the 6% capital gain is realized and taxed at 20%. When the ordinary tax rate is 25%, it grows at a 5.25% after-tax rate of return, 0.6%(1 − 0.25) + 6%(1 − 0.20). The low-cost active stock fund has a 0.3% expense ratio and grows at a 6.075% after-tax rate of return, 1.7%(1 − 0.25) + 6%(1 − 0.20). These active stock funds are not tax efficient; they realize some short-term capital gains each year and never benefit from the tax deferral of unrealized gains. The passive stock index fund is tax efficient. Each year it distributes little net income—only 0.9%—and realizes few capital gains—5% of capital gains. Therefore, most of the passive fund's returns grow unrealized—just like the annuity—but it avoids the annuity's higher costs.

In each case, the original $40,000 investment provides a constant after-tax retirement income for 25 years. The level of retirement income depends upon several factors: bond or stock fund, rate of return, and tax rates. For each savings vehicle, Tables 3 through 6 present levels of after-tax retirement incomes for combinations of these factors. They will help us determine when it makes sense to save in a nonqualified annuity. Models demonstrating the calculations of the constant after-tax retirement income are available under Research at http://finance.baylor.edu/Reichenstein.

3.5. Same tax bracket before and during retirement

Tables 3 and 4 compare after-tax retirement incomes from each savings vehicle when the individual is in the same tax bracket before and during retirement. Table 3 presents retirement incomes when the underlying assets are bonds. The major lessons from this table are:

- Costs matter! The low-cost savings vehicles always provide the highest after-tax retirement incomes. The low-cost annuity and low-cost bond fund always provide more retirement income than the average-cost annuity and average-cost bond fund.
- Knowledgeable investors who want a bond investment should compare the low-cost annuity to the low-cost bond fund. Assuming 5.5% returns, the breakeven period for the low-cost annuity is 17 years; that is, it takes 17 years (rounded to the nearest year) for the benefit of tax deferral to offset this annuity's 0.3% cost disadvantage.
- If gross returns average 8%, the low-cost annuity's breakeven period (compared to the low-cost bond fund) is 8 years. Everything else the same, a higher interest rate favors the annuity and lowers the breakeven period.
- The income from the average-cost annuity never matches the income from the low-cost bond fund. The annuity's tax-deferral advantage never offsets its cost disadvantage.
- Some individuals buy an annuity for its protection against lawsuits. They should first fully fund ERISA-qualified plans. Annuities may offer the next-best protection. If so,

Table 3
After-tax retirement incomes from bond funds held in annuities and taxable accounts: same tax bracket before and during retirement

Years until age 65 n	Gross bond returns	Average-cost annuity	Low-cost annuity	Average-cost bond fund	Low-cost bond fund
0	5.5%	$2,105	$2,351	$2,244	$2,438
	8%	$2,521	$2,784	$2,680	$2,895
10	5.5%	$2,743	$3,455	$3,105	$3,575
	8%	$4,077	$5,134	$4,440	$5,076
20	5.5%	$3,675	$5,335	$4,295	$5,241
	8%	$7,036	$10,219	$7,353	$8,899
30	5.5%	$5,015	$8,416	$5,943	$7,684
	8%	$12,396	$20,668	$12,178	$15,602

Zero, 10, 20, or 30 years before retirement, the individual invests $40,000 in either a nonqualified annuity or a mutual fund held in a taxable account. The dollar amounts are the constant annual after-tax incomes she can withdraw each year for 25 years during retirement. Gross bond returns are 5.5% or 8%. The average-cost annuity has a 2% annual expense ratio and $26 annual contract fee. The low-cost annuity has a 0.6% expense ratio and no contract fee. The average-cost bond fund has a 1.1% expense ratio, 1.4% front-end load, and 1% deferred load. The low-cost bond fund has a 0.3% expense ratio and no loads. Tax rates on ordinary income are 25% before and during retirement.

Table 4
After-tax retirement incomes from stock funds held in annuities and taxable accounts: same tax bracket before and during retirement

Years until age 65	Gross stock returns	Average-cost annuity	Low-cost annuity	Average-cost active stock fund	Low-cost active stock fund	Low-cost passive stock fund
0	8%	$2,503	$2,784	$2,688	$2,971	$3,090
	12%	$3,224	$3,525	$3,489	$3,810	$4,036
10	8%	$4,013	$5,134	$4,483	$5,358	$5,919
	12%	$7,541	$9,521	$7,853	$9,250	$10,897
20	8%	$6,854	$10,219	$7,478	$9,664	$11,488
	12%	$19,137	$27,806	$17,673	$22,456	$30,141
30	8%	$11,956	$20,668	$12,475	$17,429	$22,396
	12%	$49,016	$81,752	$39,774	$54,519	$83,855

Zero, 10, 20, or 30 years before retirement, the individual invests $40,000 in either a nonqualified annuity or a mutual fund held in a taxable account. The dollar amounts are the constant annual after-tax incomes she can withdraw each year for 25 years during retirement. Gross stock returns are 8% or 12%. The average-cost annuity has a 2.1% annual expense ratio and $26 annual contract fee. The low-cost annuity has a 0.6% expense ratio and no contract fee. The average-cost stock fund has a 1.4% expense ratio, 1.7% front-end load, and 1.1% deferred load. The low-cost stock fund has a 0.3% expense ratio and no loads. The active stock fund generates 2% gross dividends plus short-term gains each year, while the remainder is long-term capital gains that are realized in 1 year and 1 day. The passive fund generates 1.2% gross dividends and realizes 5% of unrealized capital gains each year. Tax rates on ordinary income are 25% before and during retirement. Capital gains tax rates are 20% for active stock funds and 18% for the passive fund.

they should invest in a low-cost annuity because it provides substantially higher income than an average-cost annuity.

- Some prior studies only compare incomes or ending wealth from an average-cost annuity and an average-cost mutual fund. At 5.5% gross returns, the average-cost annuity never offsets its higher costs compared to an average-cost bond fund. Even at 8% gross returns, the breakeven period exceeds 20 years. However, studies that ignore the low-cost alternatives ignore the relevant comparison for knowledgeable investors.

It is easy to explain the importance of costs. Suppose gross returns average 5.5%. *Ignoring the $26 annual contract charge,* the average-cost annuity provides a 3.5% tax-deferred net return. From the investor's perspective, its 2% expense ratio is like a 36.4% tax rate, 2%/5.5%. Meanwhile, the 3.5% is not tax-exempt. It is merely tax deferred. The low-cost bond fund provides a 5.2% net return and a 3.90% after-tax return, 5.2% (1 − 0.25). Obviously, the low-cost bond fund's 3.90% *after-tax return* beats the average-cost annuity's 3.5% *tax-deferred return,* and the longer the investment horizon the larger is the ending wealth advantage.

Huggard (1999, 2001) compares investments in annuities and average-cost mutual funds (held in taxable accounts) and consistently concludes that the annuity wins. The following is indicative of his analysis. Assume an initial investment of $40,000 made 10 years before retirement and 5.5% gross return. In 10 years and ignoring the $26 per year contract fee, the average-cost annuity would have a market value of $56,424 on the retirement date, $40,000 $(1.035)^{10}$. This consists of $40,000 *after-tax* principal and $16,424 *pretax* deferred returns. If withdrawn at age 65, the investor pays taxes at 25% on the $16,424 of deferred returns and it is worth $52,318 after taxes. If withdrawn over a 25-year retirement period, it provides $2,743 a year of after-tax income. In 10 years, the average-cost mutual fund's market value (ignoring loads) is $55,343, $40,000 $(1.033)^{10}$. If withdrawn at age 65, its after-tax value is also $55,343 since taxes were paid each year. If withdrawn over 25 years, it provides a retirement income of $3,105. He would conclude that the annuity beat the mutual fund because it had a higher market value after 10 years—$56,424 versus $55,343.

Because Huggard's work consistently favors annuities over mutual funds, it is important to critique his analysis. First, he always compares an average-cost annuity to an average-cost tax-inefficient mutual fund. My comparisons also include low-cost and average-cost annuities and not only low-cost and average-cost mutual funds but also tax-inefficient and tax-efficient stock funds. I believe the critical distinction across studies is in the comparisons. His studies only consider comparisons that are appropriate for unsophisticated investors who lack knowledge of available alternatives. In this study and in Reichenstein (2000b), I also provide comparisons that are appropriate for knowledgeable investors.

Second, Huggard inappropriately compares market values after 10 years. The annuity's $56,424 market value consists of a combination of pretax and after-tax funds, while the mutual fund's contains only after-tax funds. A comparison of their market values is an apples-to-oranges comparison. One proper comparison is to compare after-tax dollars to after-tax dollars if withdrawn in 10 years. In this comparison, the average-cost mutual fund wins. Another proper comparison is to compare the constant annual after-tax retirement incomes if withdrawn over 25 years. In this comparison, the average-cost mutual fund wins.

Third, he never considers the $26 contract fee, which can be a substantial burden especially for smaller investment amounts. In addition, Huggard taxes a mutual fund's capital gains *twice*. A more in-depth critique of Huggard (1999) is available on my home page.

Table 4 presents the retirement incomes when the underlying investment is a stock fund. The major lessons of this table can be quickly covered:

- Again, costs matter! The three best savings vehicles are the low-cost ones.
- Knowledgeable investors who want a stock investment and can and will passively manage stocks should compare the low-cost annuity to the low-cost passive stock fund. The low-cost passive stock fund always provides the higher retirement income. Passive investors are those who passively manage a portfolio of individual stocks or invest in a passively managed stock fund, such as many index funds. The key is to allow unrealized gains to grow unharvested for many, many years.
- Many knowledgeable investors cannot or will not passively manage stocks. They should compare the low-cost annuity to the low-cost active stock fund. Assuming 8% returns, it takes 15 years for this annuity's tax-deferral benefit to offset the active fund's cost advantage. Assuming 12% returns, the breakeven period is 8 years.
- Some individuals buy an annuity for its protection against lawsuits. They should first fully fund ERISA-qualified plans. Annuities may offer the next-best protection. If so, they should invest in a low-cost annuity because it provides substantially higher income than an average-cost annuity.
- Some prior studies compare an average-cost annuity and an average-cost mutual fund. At 8% gross returns, the average-cost annuity does not offset its higher costs even for someone retiring in 30 years. At 12% returns, the average-cost annuity offsets its higher costs after about 13 years. However, studies that ignore the low-cost alternatives ignore the relevant comparison for knowledgeable investors.

Recall that when the investments are bonds, the low-cost annuity provides more income than the low-cost bond fund at sufficiently long investment horizons. When the investments are stocks held passively, the low-cost annuity never provides more income than the low-cost passive stock fund. It is easy to explain why. Bond interest is tax deferred in the annuity and fully taxable in the taxable bond fund. Thus the benefit of tax deferral eventually exceeds the annuity's higher cost. When the assets are stocks held passively, net returns are tax deferred in the annuity, but most returns are tax deferred in a passive stock fund, too. In addition, capital gains are eventually taxed at 25% in the annuity and 18% in the passive index fund.

3.6. Lower tax bracket during retirement

Tables 5 and 6 compare after-tax retirement incomes from each savings vehicle when the individual is in the 33% tax bracket before retirement and 25% bracket during retirement. Many high-income taxpayers expect to be in a lower tax bracket during retirement. The assumed 8% decrease in tax bracket is a hefty decrease. This improves the comparative position of annuities since their returns are not only tax deferred, but they are also taxed at a lower rate. Tables 5 and 6 presents the retirement incomes when the underlying assets are, respectively, bonds and stocks. The major points from these tables are:

Table 5
After-tax retirement incomes from bond funds held in annuities and taxable accounts: lower tax bracket after retirement

Years until age 65	Gross bond returns	Average-cost annuity	Low-cost annuity	Average-cost bond fund	Low-cost bond fund
0	5.5%	$2,105	$2,351	$2,244	$2,438
	8%	$2,521	$2,784	$2,680	$2,895
10	5.5%	$2,743	$3,455	$3,000	$3,434
	8%	$4,077	$5,134	$4,212	$4,788
20	5.5%	$3,675	$5,335	$4,012	$4,837
	8%	$7,036	$10,219	$6,618	$7,918
30	5.5%	$5,015	$8,416	$5,365	$6,812
	8%	$12,396	$20,668	$10,400	$13,094

   Zero, 10, 20, or 30 years before retirement, the individual invests $40,000 in either a nonqualified annuity or a mutual fund held in a taxable account. The dollar amounts are the constant annual after-tax incomes she can withdraw each year for 25 years during retirement. Gross bond returns are 5.5% or 8%. The average-cost annuity has a 2% annual expense ratio and $26 annual contract fee. The low-cost annuity has a 0.6% expense ratio and no contract fee. The average-cost bond fund has a 1.1% expense ratio, 1.4% front-end load, and 1% deferred load. The low-cost bond fund has a 0.3% expense ratio and no loads. Tax rates on ordinary income are 33% before retirement and 25% during retirement.

Table 6
After-tax retirement incomes from stock funds held in annuities and taxable accounts: lower tax bracket after retirement

Years until age 65 n	Gross stock returns	Average-cost annuity	Low-cost annuity	Average-cost active stock fund	Low-cost active stock fund	Low-cost passive stock fund
0	8%	$2,503	$2,784	$2,688	$2,971	$3,090
	12%	$3,224	$3,525	$3,489	$3,810	$4,036
10	8%	$4,013	$5,134	$4,463	$5,290	$5,878
	12%	$7,541	$9,521	$7,818	$9,135	$10,824
20	8%	$6,854	$10,219	$7,410	$9,419	$11,329
	12%	$19,137	$27,806	$17,517	$21,904	$29,737
30	8%	$11,956	$20,668	$12,305	$16,771	$21,931
	12%	$49,016	$81,752	$39,250	$52,519	$82,172

   Zero, 10, 20, or 30 years before retirement, the individual invests $40,000 in either a nonqualified annuity or a mutual fund held in a taxable account. The dollar amounts are the constant annual after-tax incomes she can withdraw each year for 25 years during retirement. Gross stock returns are 8% or 12%. The average-cost annuity has a 2.1% annual expense ratio and $26 annual contract fee. The low-cost annuity has a 0.6% expense ratio and no contract fee. The average-cost stock fund has a 1.4% expense ratio, 1.7% front-end load, and 1.1% deferred load. The low-cost stock fund has a 0.3% expense ratio and no loads. The active stock fund generates 2% gross dividends plus short-term gains each year, while the remainder is long-term capital gains that are realized in 1 year and 1 day. The passive fund generates 1.2% gross dividends and realizes 5% of unrealized capital gains each year. Tax rates on ordinary income are 33% before retirement and 25% during retirement. Capital gains tax rates are 20% for active stock funds and 18% for the passive fund.

- Again, costs matter! The low-cost vehicles always provide the highest retirement incomes.
- When the underlying assets are bonds, the low-cost annuity often provides a higher retirement income than the low-cost bond fund. At 5.5% gross returns, the breakeven period is 9 years. At 8%, it is 5 years.
- When the underlying assets are stocks, the low-cost passive stock fund continues to dominate the low-cost annuity.
- Many individuals cannot or will not passively manage stocks. They should compare the low-cost annuity to the low-cost active stock fund. At 8% gross returns, the breakeven period is 13 years. At 12%, it is 8 years.
- Some individuals buy an annuity for its protection against lawsuits. They should first fully fund ERISA-qualified plans. If annuities provide the next-best protection then they should invest in a low-cost annuity because it provides substantially higher incomes than the average-cost annuity.
- Some prior studies only compare an average-cost annuity and an average-cost mutual fund. Assuming 5.5% gross bond returns or 8% stock returns, the average-cost annuity does not offset its higher costs even after 30 years. Assuming 12% stock returns, the breakeven period is 13 years. However, studies that ignore the low-cost alternatives ignore the relevant comparison for knowledgeable investors.
- Advocates of nonqualified annuities like to point out that, when the individual will be in a lower tax bracket during retirement, the annuity not only provides tax deferral but returns are eventually taxed at lower rates. In this example, returns are deferred and eventually taxed at 25% instead of 33%. This gives annuities an important advantage compared to bond mutual funds because bond interest is passed through to the mutual fund investor. However, the 33% tax rate before retirement does little to improve annuities compared to active or passive stock funds. Because only a small portion of stock fund returns is taxed at the higher 33% rate, there is little difference between their retirement incomes in Tables 4 and 6. For example, only 1.7% of the low-cost active fund's returns is taxed at 33%, where 1.7% is 2% dividend plus short-term gain less 0.3% expense ratio. The remainder of its returns is taxed at 20%, which is less than the 25% tax rate annuities eventually pay on gains.

4. Incentives

The analysis in the prior sections implies that few individuals should buy a nonqualified annuity. Before buying this annuity, at a minimum they should first fully fund deductible pensions and Roth IRAs. The analysis implies that these annuities make the most sense for individuals concerned about creditor protection and the young. Average-cost annuities are never in the best interest of the investor. Yet, LIMRA International (1999) reports nonqualified annuity sales of $66 billion, the average age of buyers is 63, and only 11% are bought by individuals younger than 45. Moreover, Reichenstein (2000b) reports that 95% of stock funds in annuities have annual expenses of at least 1.5%. This section tries to explain why

the profile of nonqualified annuity buyers is so different from the profile of buyers for whom they are best suited.

Nonqualified annuities are complex contracts. Few individuals walk into a broker's office saying they want to buy a nonqualified annuity. The incentive structures surrounding annuity sales can explain why commission-based professionals frequently push an annuity even when it is not in the client's best interest. Also, incentive structures explain why fee-only professionals sometimes discouraged clients from buying an annuity when it is in the client's best interest.

Suppose a client asks a commission-based broker to help her invest $40,000. The broker gets no commission if the client does any of the following: increase her 401(k) or Roth IRA contribution, buy a no-load low-cost annuity, or buy a no-load mutual fund. If the client buys an average-cost mutual fund with a 3% front-end load, the broker gets $1,200. If she buys an average-cost annuity, the broker may get a 6% commission or $2,400. It is in the broker's interest to recommend the high-commission annuity.

Sales commissions are linked to the surrender fee. If the commission on an average-cost annuity is the typical 6% then the surrender fee will likely be 6% if the investor exits the annuity in the first year. This allows the insurance company to cover the broker's sales commission. The surrender fee typically falls 1% a year. If the client opts out after 1 year, she owes a 5% surrender fee. Because the average annual insurance fee is 1.31%, the insurance firm more than makes up for the 1% lower surrender fee. Thus average-cost annuities typically pay the salesman a hefty commission and impose a surrender fee, whereas low-cost annuities neither pay a sales commission nor impose a surrender fee. For example, in the January 2001 version of Principia Pro for Variable Annuities/Life, none of the 40 variable annuities with total expenses of 0.75% or lower charge a surrender fee, whereas 87% of annuities with expenses above 1.5% do.

In contrast, the income of a fee-only professional is not based on commissions. Rather, he typically charges 1% per year on assets *under management.* If a client buys a $40,000 annuity, the professional will likely get $400 less in fees the first year. It is not in the fee-only professional's self interest to recommend the annuity.

5. Conclusion

The first paragraph of this study posed the question, "Who should buy a nonqualified tax-deferred annuity?" First, individuals who are saving for preretirement needs should seldom buy an annuity, because there is usually a 10% penalty tax for withdrawals before age 59.5. An annuity often makes sense for individuals who are in one of the following two groups:

1. They are concerned about protection from creditors.
2. They have long investment horizons.

In addition, an annuity often makes sense for individuals in the distribution stage of life who are interested in an annuity's ability to reduce longevity risk. Ameriks et al. (2001) address this topic.

Individuals may seek an annuity for its creditor-protection feature. Because creditor protection is strongest on funds in ERISA-qualified plans, these individuals should first fully fund their ERISA-qualified plans before buying an annuity. Depending upon the state, the annuity may offer the next-best protection. If they buy an annuity for its creditor protection then they should seek a low-cost annuity.

The second group of investors that should be interested in annuities is individuals with long investment horizons. They should first fully fund their Roth IRAs and deductible pensions since these vehicles are more tax favored than the nonqualified annuity. If they have fully funded these savings vehicles and are looking to save additional funds for retirement then they must choose between saving in an annuity and saving in a mutual fund held in a taxable account. The major conclusions from analysis of this choice are as follows.

- Costs matter a great deal. Knowledgeable investors should compare a low-cost non-qualified annuity to a low-cost mutual fund.
- Some individuals want an investment in bond funds. Assuming 5.5% gross bond returns and 25% tax brackets before and during retirement, the low-cost annuity should be preferred by individuals with investment horizons exceeding 17 years. The breakeven period is less than 10 years if returns average 8% or if the investor is in a 33% tax bracket before retirement and 25% during retirement.
- The choice between a low-cost annuity and a stock fund held in a taxable account is more complex because of the tax treatment of the stock fund in the taxable account. Individuals who will buy and retain a low-cost passive stock fund for at least a decade should favor this stock fund to the low-cost annuity. In the passive stock fund, most capital gains accumulate tax deferred—just like in the annuity. In addition, this passive fund has two advantages: it has lower costs, and capital gains are eventually taxed at preferential rates.
- Many investors will not passively manage individual stocks or hold a passive stock fund. These investors should compare a low-cost annuity to a low-cost active stock fund. Assuming 8% gross stock returns and 25% tax brackets before and during retirement, the breakeven period is 15 years. The breakeven period is 8 years if gross returns average 12%. The breakeven period is only slightly shorter for someone in a higher preretirement tax bracket.
- The big loser in the analyses is the insurance industry's staple—annuities with expense ratios around 2% and with annual contract fees. These products are not in the best interest of investors.
- Finally, incentive structures can explain why commission-based financial advisors usually push average-cost annuities, whereas fee-only advisors usually discourage the purchase of any annuity. Unfortunately, it appears that the advice frequently is not in the best interest of the client.

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