Asset Location – Bonds Go In Taxable!

I've written about this subject before, but it has been over a year, and based on questions I'm seeing in the comments section and my email box, and recommendations I'm seeing in online forums, people aren't getting it. Many investing authorities over the years have recommended that if you have to use a taxable account, that you preferentially put very tax-efficient asset classes, such as stock index funds into it, while preferentially putting tax-inefficient asset classes, particularly bonds, into your tax-protected accounts, like 401Ks and Roth IRAs. This seems like a nice simple way to conceptualize the subject of asset location. However, as Einstein famously said, "Make things as simple as possible, but not simpler." It turns out that basing your decision simply on the tax-efficiency of the asset class is making things "simpler." You also have to take rate of return into consideration, and for bonds, that varies highly with changes in interest rates.

Remember The Value Of A Tax-Protected Account

To understand this, it is important to first be able to conceptualize the value of a tax-protected account. The value of a Roth (AKA after-tax, AKA tax-free) account is simply the value of the tax-free growth, i.e. how much more money you'd have in the Roth account than you would have if you had put the investment into a taxable account. Obviously, there are also some estate planning and asset protection benefits and perhaps some additional fees, but let's ignore all that for the moment. The value of a 401K (AKA tax-deferred) account is a little more complicated. First, you recognize that the money in a 401K is only partly yours. Part of it is the governments. If your marginal tax rate at contribution is 33%, only 2/3 of the 401K is yours. On that 2/3, the benefit is the same as the Roth. There is also the possibility of a tax arbitrage. If you contribute at a 33% marginal tax rate, but withdraw the money at a 17% effective tax rate, you get an additional significant benefit out of the 401K. Obviously, the arbitrage CAN be negative, but that's pretty unlikely for most doctors, even with a rise in marginal tax rates. More details on calculating the benefit of retirement accounts can be found in my recent post on the value of a 401K.

The important concept to understand here, of course, is that assets grow faster in the retirement account due to the lack of tax drag. So you will benefit from having a fast-growing asset (i.e. stocks) inside the retirement account. It expands your tax-protected space, increasing your tax benefit, estate planning benefit, and asset protection benefit as the years go by. You have to weigh that benefit against the additional tax drag of having a tax-inefficient asset class in the taxable account. At our current low interest rates, the first benefit dramatically outweighs the second. Let's look at two examples to understand this.

Why Bonds Go In Taxable

[Update: Post updated 2/11/2014 with some minor changes to the calculations to make them more accurate, based on criticism found in the comments section below. These changes made the numbers less impressive, but did not change the conclusions.]

Make a few reasonable assumptions, and it becomes easy to see why bonds belong in taxable. Let's assume a $200K portfolio, split half into a Roth IRA and half into a taxable account. Our physician investor has a 33% marginal tax rate, a 15% long-term capital gains/dividends rate, an 8% return for stocks of which 1.86% (the actual yield on the Vanguard Total Stock Market Fund on 2/11/2014) comes from qualified dividends/long-term capital gains, and a 2.16% return for municipal bonds and 2.69% for high quality taxable bonds (actual yields from appropriate Vanguard bond funds on 2/11/2014.) We'll also assume no rebalancing to keep things simple, but that won't distort the direction of results, only the magnitude. (Run the examples using just 1 year if you're not convinced of this.) Note that this physician will use muni bonds when bonds are in taxable, and taxable bonds when bonds are in the Roth since 2.69*(1-33%) < 2.16%.

If you put the bonds in the Roth, you get this:

Roth IRA
$100K Bonds grows at 2.69% for 30 years to $221,740
=FV(2.69%,30,,-100000,1)=221,740

Taxable
$100K Stocks grows at 8% -(15% * the 1.86% yield) = 7.72% to $930,873 over 30 years. =FV(7.72%,30,,-100000,1)

You don't pay capital gains on the original $100K, nor on the $183,177 in dividends received. So capital gains taxes on the $647,696 in gains are $97,154, leaving you with $930,873-$97,154 = $833,718.

Total = $1,055,459

Now, put the stocks in the Roth, and you'll get this.

Roth IRA
$100K Stocks grows at 8% for 30 years to $1,006,266

Taxable
$100K Municipal Bonds grows at 2.16% for 30 years to $189,857

Total = $1,196,123

You get $140,664 or 13% MORE by putting the stocks into the Roth.

Even Under Old Assumptions Bonds Should Be in Taxable

Now, what really surprised me, was when I ran the numbers using what someone could have assumed just a few years ago. It used to be that you could expect a return of about 8% from stocks, about 5% from taxable bonds, perhaps 4% from municipal bonds, and a 2% stock market yield. Capital gains and qualified dividends were taxed at 15%. Under those assumptions, you might think that it would be best to put taxable bonds into your retirement accounts, especially for a high earner with a 33% tax bracket. Surely at those higher bond rates of return and lower tax rate on stocks, we should put bonds into the Roth, no? Let's take a look.

First, bonds in the Roth

Roth IRA
$100K Taxable Bonds grows at 5% to $432,194 over 30 years

Taxable

$100K Stocks grows at 8% -(15% * the 2% yield) = 7.7% to $925,702 over 30 years. You then pay capital gains taxes on $629,367 ($94,405) and are left with a total of $831,297.

Total = $1,263,491

Then, we'll try bonds in taxable, (and given the 33% bracket, we'll use the muni bonds at 4%, although using taxable bonds with an after-tax return of 3.35% doesn't change the direction of results, only the magnitude)

Roth IRA
$100K Stocks grows at 8% to $1,006,266 over 30 years

Taxable
$100K Municipal Bonds grows at 4% to $324,340 over 30 years

Total = $1,330,606

Bonds in taxable STILL leaves you with $67,115, or 5% more. Now, I'm sure if we try hard enough we can come up with a set of assumptions that will favor putting bonds in tax-protected (it will likely involve a great deal of tax-loss harvesting and donation of shares or getting the step-up in basis at death), but under any reasonable assumptions in our current environment, it's pretty hard to justify that advice.

[Update 2/11/14: Using current yields, even if you assume that you DIE without ever selling any of the appreciated stock fund shares in the taxable account (meaning you get a complete step-up in basis at death), stocks in Roth still comes out ahead by $43,510 (4% more). If you use the "old assumptions," and have a complete step-up in basis at death, stocks in taxable finally wins, but only by $27,290, or 2%. This demonstrates the importance of running these numbers yourself using current yields and other assumptions specific to your situation when making asset location decisions, rather than blindly following a rule of thumb, unless having 13% more

money to spend doesn't matter to you.]

Keep in mind that this exercise is already slanted in favor of the bonds in the tax-protected account just by virtue of the fact that we're assuming we're pulling all that Roth money out exactly after we finish contributing it, when in reality, it will likely be withdrawn over the next 15-30 years by the retiree, and perhaps another 20 by the retiree's heir.

Too many investors, including many very knowledgeable investors and advisors, have been giving portfolio construction advice that is too simple, and costing those taking it real money. Even the Bogleheads just recently revised their Wiki on this subject to show that stocks in taxable isn't always right. Put your bonds in taxable and let proper asset location give your portfolio a boost.

What do you think? How did the dogma of "stocks in taxable" get started and why does it persist? Comment below!