One Change in Environment: Taxes Exist and Distribution Strategies in Retirement Matter

Changing Investment Environment
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William Reichenstein, PhD, CFA
Powers Professor of Investments Baylor University
Principal, Retiree, Inc.
Do Planners Recognize that Taxes Exist when Managing Money?

- When Calculating Asset Allocation, about 18% of CFA charter holders managing private wealth adjust pre-tax balances in 401(k) and other tax-deferred accounts for taxes.

Outline:

1. Key Concept: $1 of pre-tax funds in 401(k) is like \((1 - t_n)\) dollar of after-tax funds in Roth IRA, where \(t_n\) is the tax rate in retirement
2. Implications for calculating asset allocation
3. Effective tax rates on bonds and stocks held in Roth, 401(k), and taxable account
4. Implications for asset location
5. Implications for withdrawal strategies in retirement
6. Roth conversions in withdrawal strategies
Key Concept

1. $1 of *pre-tax* funds in 401(k) is like \((1 - t_n)\) dollar of *after-tax* funds in Roth IRA, where \(t_n\) is the tax rate in retirement.

- Henceforth, **tax-deferred account (TDA)** represents 401(k), 403(b), traditional IRA, Keogh, etc.
- Henceforth, **Roth** represents Roth IRA, Roth 401(k) and Roth 403(b).
Comparing After-tax Future Values Of $1 of pretax funds in TDA to $1 of after-tax funds in Roth

- Assume today’s $1 market value earns pre-tax return of $r$ per year for $n$ years. Funds will be withdrawn $n$ years hence when the individual will have a 28% marginal tax rate, i.e., $t_n = 28$
- Tax-deferred account: $1(1+r)^n (1-0.28)$
- Roth: $1(1+r)^n$
- If invested in the same asset, the after-tax value of the tax-deferred account will be worth $(1-t_n)$ or 72% of the Roth’s after-tax value.
Examples

- Let’s turn things around. $0.72 in a Roth will buy the same amount of goods and services in retirement as $1 in a TDA.
Conclusion and Concepts

- **Conclusion:** $1 of pre-tax funds in tax-deferred account is like $(1-t_n)$ of after-tax funds in Roth.
- Conceptually separate each pre-tax $1 in tax-deferred account into $(1-t_n)$ of the investor’s after-tax funds plus $t_n$, where $t_n$ is the government’s share of the current principal.
- In essence, the tax-deferred account is like a trust with the government being a silent partner that “owns” $t_n$ of this trust.
2. Implications for calculation of asset allocation
What is Peggy’s Asset Allocation?

<table>
<thead>
<tr>
<th>Market Value</th>
<th>Asset</th>
<th>Savings Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500,000</td>
<td>Bonds</td>
<td>Tax-def Acct</td>
</tr>
<tr>
<td>$500,000</td>
<td>Stocks</td>
<td>Roth</td>
</tr>
</tbody>
</table>

Assume she will have a 28% marginal tax rate in retirement.
What is her Asset Allocation?

- According to the after-tax approach, it contains $360,000 or $500,000 (1-.28) after taxes in bonds and $500,000 after taxes in stocks for a 42% bonds and 58% stocks after-tax asset allocation.
- According to the traditional approach, it is 50% bonds and 50% stocks.
- The traditional approach exaggerates the allocation to the dominant asset held in 401(k).
But Peggy does not know $t_n$!

- Since the traditional approach ignores taxes, it implicitly assumes $t_n$ will be zero.
- It is better to estimate $t_n$ and calculate an asset allocation that is approximately right than to assume $t_n$ is zero.
3. Effective tax rates on bonds and stocks held in Roth, TDA, and taxable account
After-tax Future Values of Bonds and Stocks Held in Roth, Tax-deferred Account, and Taxable Account

<table>
<thead>
<tr>
<th></th>
<th>Bonds</th>
<th>Stocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roth</td>
<td>((1+r)^n)</td>
<td>((1+r)^n)</td>
</tr>
<tr>
<td>Tax-def Account</td>
<td>((1+r)^n (1-.28))</td>
<td>((1+r)^n (1-.28))</td>
</tr>
<tr>
<td>Taxable Account</td>
<td>((1+r(1-.28))^n)</td>
<td>Day Trader: ((1+r(1-.28))^n)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Active Investor: ((1+r(1-.20))^n)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Passive Investor: ((1+r)^n(1-.20)+.20)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exempt Investor: ((1+r)^n)</td>
</tr>
</tbody>
</table>

\(r=\) pre-tax return, \(n=\) investment horizon in years
Assume \(t = t_n = 28\%\) and long-term capital gain tax rate, \(t_c = 20\%\).
For simplicity assume all stock returns are capital gains.
Effective tax rates on bonds and stocks held in Roth, TDA, and taxable account

<table>
<thead>
<tr>
<th></th>
<th>Bonds</th>
<th>Stocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roth</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Tax-def Account</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Taxable Account</td>
<td>28%</td>
<td>Day Trader: 28%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Active Investor: 20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Passive Investor: &lt; 20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exempt Investor: 0%</td>
</tr>
</tbody>
</table>

\( r = \) pre-tax return, \( n = \) investment horizon in years

Assume \( t = t_n = 28\% \) and long-term capital gain tax rate, \( t_c = 20\% \).
For simplicity assume all stock returns are capital gains.
For someone who will be in the 28% tax bracket in retirement, the after-tax value of a dollar of pre-tax funds in a tax-deferred account grows from $0.72 today to $0.72(1+r)^n in n years. The investor effectively “owns” $(1-t_n)$ of principal, but the after-tax value grows tax exempt.
4. Implications for asset location

Conclusion: Bonds should be held in retirement accounts (i.e., tax-deferred accounts and Roths) and stocks in taxable accounts, while maintaining the target asset allocation?
## Logic of Asset Location

<table>
<thead>
<tr>
<th>Asset Location</th>
<th>Effective Tax Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Stocks in taxable accounts</strong>&lt;br&gt;<strong>Bonds in tax-def accounts and Roths</strong></td>
<td>20% tax rate</td>
</tr>
<tr>
<td></td>
<td>0%</td>
</tr>
<tr>
<td><strong>2. Bonds in taxable accounts</strong>&lt;br&gt;<strong>Stocks in tax-def accounts and Roths</strong></td>
<td>28% tax rate</td>
</tr>
<tr>
<td></td>
<td>0%</td>
</tr>
</tbody>
</table>
Concept

- It is better to let the government take 20% of stocks’ returns and risk than 28% of bonds’ returns and risk.
- So, locate stocks in taxable accounts and bonds in retirement accounts including tax-deferred accounts and Roths.
Target Asset Allocations

<table>
<thead>
<tr>
<th>Asset Allocation</th>
<th>30% Stocks</th>
<th>50% Stocks</th>
<th>70% Stocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonds ret acct</td>
<td>$500,000</td>
<td>$500,000</td>
<td>$300,000</td>
</tr>
<tr>
<td>Stocks ret acct</td>
<td>$0</td>
<td>$0</td>
<td>$200,000</td>
</tr>
<tr>
<td>Bonds tax acct</td>
<td>$200,000</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Stocks tax acct</td>
<td>$300,000</td>
<td>$500,000</td>
<td>$500,000</td>
</tr>
<tr>
<td>Total</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
</tr>
</tbody>
</table>

- Assume $1 million after-tax portfolio, 50% in retirement accounts and 50% in taxable accounts.
- Bonds and stocks should not be held in *both* retirement and taxable accounts ...
- ... except liquidity reserves must be held in taxable account.
Generalized Advice on Asset Location

- Place bonds, REITs, and other assets with returns subject to ordinary income tax rate in tax-deferred accounts and Roths.
- Place stocks, especially passively held stocks, in taxable accounts.
5. Implications for withdrawal strategies in retirement

Assume clients have funds in TDA, Roth IRA, and taxable account. How should they withdraw funds to make their retirement nest egg last longer?
Rule of Thumb

○ Recall that the effective tax rate on funds held in Roths and tax-deferred accounts is 0%, while effective tax rates on assets held in taxable accounts are generally positive.

○ Rule of Thumb: Withdraw funds from taxable accounts before retirement accounts.
Exceptions to Rule of Thumb

- **Key idea:** The government effectively owns $t_n$ of principal in tax-deferred accounts, where $t_n$ is the tax rate at withdrawal. Look for situations when $t_n$ is low!

- Before RMDs begin after 70.5, your client’s taxable income may be low. If so, consider withdrawing funds from tax-deferred accounts (or convert funds from traditional IRA to Roth IRA) to use low tax brackets.
Exceptions to Rule of Thumb

- If your client’s tax bracket will rise after 2010 then withdraw funds from TDAs to top of “low” tax bracket this year.
- When tax rate is low—perhaps due to deductible medical expenses or large contributions—withdraw funds from tax-deferred accounts.
- If your client is terminally ill, don’t realize capital gains even if this means dipping into tax-deferred accounts or Roths.
Withdrawal Strategy from Tax-deferred Account and Roth—no Bequest Motive

After withdrawals from taxable accounts, should you withdraw from TDA or Roth next?

- Objective: maximize portfolio’s longevity
- Withdraw funds from tax-deferred account to top of “low” tax bracket and then withdraw additional funds from Roth.
Withdrawal Strategy from Tax-deferred Account and Roth—Bequest Motive

After withdrawals from taxable accounts, should you withdraw from TDA or Roth next?

- Objective: maximize after-tax value of accounts for retiree and beneficiary
- Retiree’s tax rate is higher than her child beneficiary’s tax rate. She should withdraw funds from Roth and save TDA for child.
- If retiree’s tax rate is lower than her child’s, she should withdraw funds from TDA and save Roth for child.
Mike & Jen, Age 62 with $1,500,000 of assets
They began retirement in January 2010. They are wondering how long their financial portfolio may last if they spend $107,800 after taxes in 2010 and an inflation-adjusted equivalent amount each year thereafter while both spouses are alive, but 75% of that amount after the death of the first spouse at 78. They begin Social Security benefits at age 66 getting $2,500 and $1,500 each month in today’s dollars. They have $1,000,000 in 401(k)s and $500,000 in regular taxable accounts.

Strategy 1: Withdraw funds from the 401(k)s first and then the taxable accounts.
Strategy 2: Each year, withdraw funds tax efficiently from their 401(k)s and taxable accounts in a fashion that is designed to increase the longevity of their portfolio, and use a partial Roth conversion when appropriate.
In Strategy 1, the portfolio runs out of money at the end of 2039. In Strategy 2, the portfolio runs out of money in 2047. By withdrawing funds tax efficiently, they were able to extend the portfolio’s longevity by more than seven years.

See retireeinc.com then Learning Library then Case Studies.
Cyrus Age 62 with $3,000,000 of Financial Assets

He plans to retire from work this year. He has $3,000,000 in financial assets including $1,900,000 in a 401(k), $100,000 in Roth IRA, $100,000 in a non-qualified annuity, and $900,000 in regular taxable accounts. He wants to know how long his financial portfolio may last if he spends $131,000 after taxes in the first year and an inflation-adjusted equivalent amount each year thereafter.
Three Withdrawal Strategies

- **Strategy 1:** He begins Social Security at age 62 and withdraws funds tax inefficiently.
- **Strategy 2:** He begins Social Security at age 70 and withdraws funds tax inefficiently.
- **Strategy 3:** He begins Social Security at age 70 and withdraws funds in a tax-efficient manner from his financial portfolio. Each year, he will withdraw funds from his 401(k), Roth IRA, non-qualified annuity and taxable accounts in a fashion that is designed to increase the longevity of his portfolio.

- We assume he maintains a 50% stocks-50% bonds after-tax asset allocation with stocks earning 7% per year and bonds earning 3%. Primary Insurance Amount is $2,000. See www.retireeinc.com then Learning Library then Case Studies for more details.
In Strategy 1, his portfolio runs out of money at the end of 2037. In Strategy 2, his portfolio runs out of money near the end of 2038. In Strategy 3, it runs out of money part way through 2043. The tax-efficient withdrawal strategy added more than four years to his portfolio's longevity.
5. Roth conversions in withdrawal strategies
Roth Conversions

- Objective: Convert funds from TDA to Roth if it will be taxed at “low” tax rate. Convert funds to raise taxable income to the top of a “low” tax bracket.

- With Roth conversions, it is seldom a matter of converting all or none...
Roth Conversions Continued

- Suggestion: Convert more than sufficient funds in a year to fully use top of “low” tax bracket.
- Next year recharacterize whatever is necessary to take income to top of “low” tax bracket.
- For example, you might convert $50,000 in 2010 and in 2011 recharacterized $12,212.56 to take your client’s 2010 taxable income to top of “low” bracket.
Key Concepts

- Taxes exist and they matter!
- A tax-deferred account is like a trust with the government being a silent partner that “owns” $t_n$ of the trust’s principal.
- For asset allocation: Pretax dollars in TDAs are smaller than after-tax dollars in Roths.
- Effective tax rate on TDA is 0%.
- For asset location: hold stocks in taxable accounts and bonds in retirement accounts, while maintaining target asset allocation.
Key Ideas for Withdrawal Strategies

- Rule of Thumb: Withdraw funds from taxable accounts before retirement accounts like TDAs and Roths.
- Exceptions: Look for opportunities to withdraw funds from TDAs when tax rate will be unusually low.
- These may occur before RMDs begin, before tax rate hike, when medical costs are high, and when contributions are high.
Key Ideas for Withdrawal Strategies

- Concerning withdrawals from TDA and Roth, try to minimize taxes on the TDA withdrawals.
- Withdraw from TDA (or convert to Roth) up to top of low bracket.
- If beneficiary is in lower tax bracket, save the TDA for him and have retiree use the Roth, and vice versa.