Extending Retirement Payouts by Optimizing the Sequence of Withdrawals

A presentation to Participants of the

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- Any errors and omissions are my co-author's and the inconvenience is regretted.
- Application of our research to real life situations is purely coincidental.
- While our research may be of general use, individual situations vary. Hence, the advice of a competent financial and/or tax advisor should be sought before implementing any withdrawal strategy.
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Some Words on our Research

- The Risks of Retirement
  - Running out of money.
  - Unanticipated and large health care costs.
  - Decline in purchasing power.

- How “Best” to Manage the Nest Egg
  - How to make the “pot” last the longest?
  - What are the chances of running out of money?
  - How to best manage withdrawals during retirement?

The Goal and Assumptions

- To obtain the largest number of equal (inflation adjusted), <u>after-tax</u> withdrawals.

- Constant tax rates.
- Capital gains and qualified dividends are taxed as ordinary income.
- Stock and bond returns are drawn from historical data.
- Unmanaged asset location.

Preview

- Sequence of Withdrawals
  - Roth or Traditional IRA?
  - Stocks or Bonds?
  - Taxable or tax-deferred?

- What is an appropriate withdrawal rate?

Q1: I have money in two retirement portfolios. Which should I withdraw from first?

- I have \$500K in a Roth, \$500K in a 401 (k)/IRA and I want to withdraw a real \$40K at the end of each year.
- Reminder (More from 401(k)/IRA.)
- Why is it important?
- Traditional advice?
- ***It does not matter!!!!***
- A simple tax saving illustration.

Effect on withdrawal period when the tax rate varies –Two Tax Brackets

	Sequential		Simultaneous	
Conditions and Constants	Tax Deferred (401k)	Tax Exempt (Roth)	Tax Deferred (401k)	Tax Exempt (Roth)
Value at beginning of Retirement	$50.00	$50.00	$50.00	$50.00
Annual Post-tax Withdrawal	$7.50		$4.25	$3.25
Annual Pretax Withdrawal	$9.33		$5.00	$3.25
Number of years until depletion	6.48		14.69	
Value Remaining when other asset has been depleted		$70.10		$37.63
Annual Post-tax Withdrawal		$7.50		$7.50
Annual Pretax Withdrawal		$7.50		$7.50
Number of years until depletion		13.30		6.00
Total Years until depletion		**19.78**		**20.69**

Q2: What should I sell first, stocks or bonds?

- I have $1 million in a retirement account, 50% is invested in stocks and 50% in bonds.
- I would like to withdraw a real $40,000 at the end of each year.
- Should I sell stocks first (no rebalancing) or bonds first (no rebalancing) or withdraw with rebalancing?
- *A greater number of withdrawals can be made if the bond portion is depleted first.*
- The issue of risk.

Q3: What should I deplete first: taxable or tax-deferred assets?

- I have $1 million in a retirement account, 50% is held in a traditional IRA and 50% is in a regular brokerage account.
- I would like to withdraw a real $40,000 at the end of each year.
- Should I deplete the IRA or the traditional brokerage first?
- The traditional advice.
- The optimal sequencing depends on the tax rate and the rate of return of the two vehicles.
- *If the after tax rate of return in the taxable account exceeds that of the IRA, then the IRA should be depleted first.*
- An illustration

Total Years to depletion for Regular IRA and Taxable Account

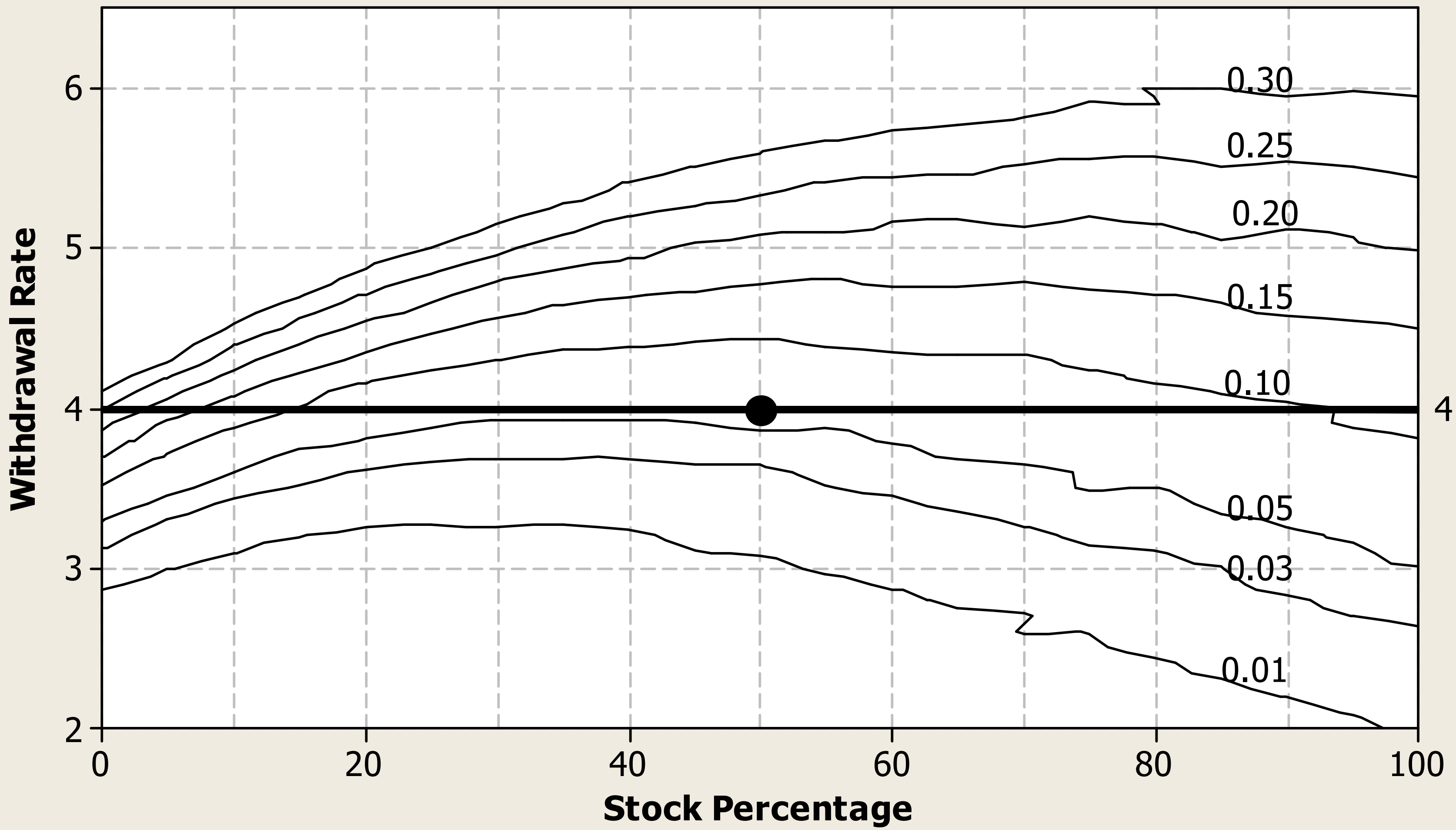
	Question 3	
Conditions and Constants	Tax-deferred (Reg. IRA)	Taxable (Brokerage)
Value at beginning of Retirement	$50.00	$50.00
Rate of growth before tax	4.425%	7.200%
Tax rate on returns	31.000%	31.000%
Rate of Growth, net of taxes if any, prior to distribution	4.425%	4.968%
Rate of Growth, net of taxes, during distribution	4.425%	4.968%
Annual Post-tax Withdrawal	$7.50	$7.50
Distribution Taxable? (All, Returns only, None)	All	Returns only
Annual Pretax Withdrawal	$10.87	$7.50
Number of years until depletion	5.26	8.30
Number of years until OTHER asset is depleted second	11.50	7.96
Total Years until depletion	16.76	16.26

Q4: What is the best withdrawal rate during retirement*?

- What is a “safe” systematic withdrawal amount?
- What factors affect this choice
  - Asset allocation
  - Ability to tolerate risk
  - Withdrawal horizon.
- *The optimal combination given a 30-year retirement seems to be:*
  - *A real withdrawal rate of 4 percent of starting balance*
  - *From a portfolio invested 30-50% in stocks.*

A Visual Assist

Figure 1. Runout Contours by Withdrawal Rate and Stock Percentage
(The number on each contour line indicates the probability of running out of money as Withdrawal Rates and Stock Percentages change)



What we know till now

- The order of withdrawal from tax deferred and tax exempt retirement accounts may not affect portfolio longevity.
- Selling bonds first in a stock/bond account seems to lengthen the withdrawal horizon.
- The rule that the tax deferred vehicle should be depleted last is not universal. Instead, it is dependent on the tax rate and return from each vehicle.
- A real withdrawal rate of 4 percent with an allocation of about 50-50 stock and bonds will last for 30 years about 94 percent of the time.

Questions?