



Wealthcare Tax Alpha Report

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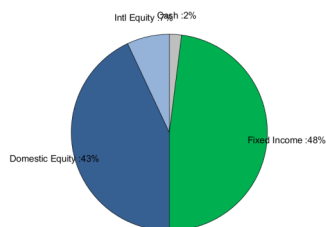
As of January 3, 2020

Manage Your Goals
Using Time-Tested
Principles



Executive Summary

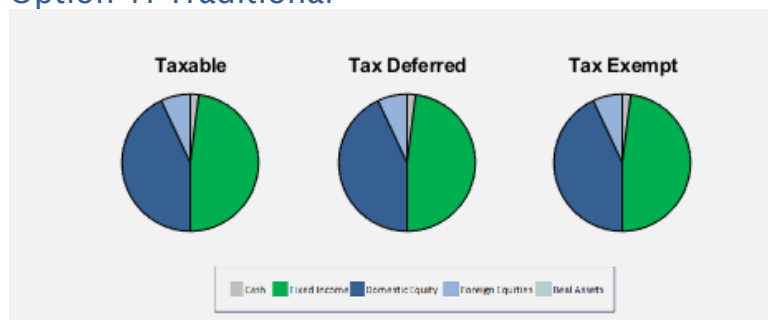
Wealthcare Process #1 : Determine Risk Allocation



This is your broad based asset allocation policy. This is the key determinant for your future portfolio return and risk. Wealthcare will rebalance to maintain this targeted asset allocation.

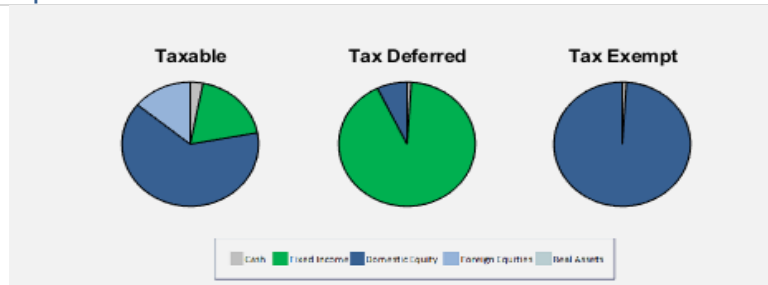
Wealthcare Process #2: Determine Implementation Policy

Option 1: Traditional¹



Under the traditional approach, each account is assigned to a model. The broad based asset allocation is similar across your various tax entities because each account is assigned to a model.

Option 2: GDX360^{®1}



Under the Wealthcare Household asset allocation approach, the entire household is assigned to a model. This framework enables Wealthcare to place tax efficient assets in taxable account and tax inefficient assets are placed in tax favored accounts.

Projected Results

0.39%	This is the projected annualized value added from the Wealthcare rebalance approach on a post liquidation basis relative to the Traditional Approach.
\$43,712	This is the projected dollar value added from the Wealthcare rebalance approach on a post liquidation basis relative to the Traditional Approach.

¹ The Traditional and Wealthcare approaches use the target allocation as the starting point for the analysis, unless your household has previously been implemented in which case the Wealthcare approach begins with your current allocation.

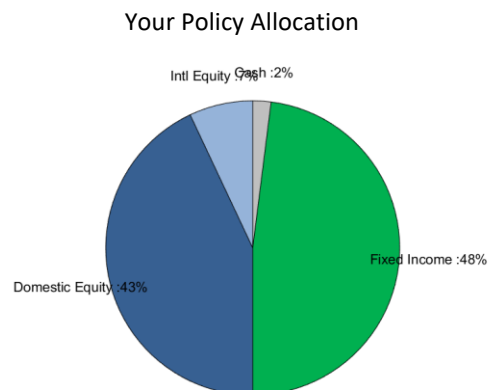
Executive Summary (continued)

<i>Category</i>	<i>Traditional</i>	GDX360[®]	<i>Difference</i>
Inception			
Begin Market Value (\$)	\$727,860	\$727,860	
Year 1 Net Income Return (\$)	\$16,799	\$17,412	\$613
Cost Analysis over 10 Year Horizon			
# of Trades	300	10	290
Transaction Costs	\$1,350	\$90	\$1,440
Taxes Before Liquidation	\$28,602	\$16,464	\$12,138
Liquidation Costs	\$153,120	\$135,751	\$17,369
Total Costs	\$180,372	\$152,305	\$28,067
Pre-Liquidation Analysis			
Ending Market Value (\$)	\$1,294,893	\$1,321,237	\$26,344
After Tax Annualized Return (%)	5.93 %	6.14 %	0.21 %
Post-Liquidation Analysis			
Ending Market Value (\$)	\$1,141,774	\$1,185,486	\$43,712
After Tax Annualized Return (%)	4.61 %	5.00 %	0.39 %

Report

Objective: This report compares the benefit of utilizing Wealthcare’s household based rebalancing approach compared to a traditional approach.

Your policy allocation is shown to the right. It is selected in consultation with your advisor, based on your goals, resources, risk tolerance and preferences. Research has shown that risk allocation is a primary driver of risk and return over time²¹. To maintain exposure to this policy allocation, rebalancing is required. Anecdotal evidence suggests that most investors do not rebalance their portfolios. The rebalancing process by nature is buying assets that have become cheap and selling assets that have become expensive. In fact, many investors do the exact opposite.



However, there are different methods to rebalancing. In this report, the traditional approach assigns each account to a model and employs calendar based rebalancing where each account is rebalanced back to the policy portfolio once a year. In contrast, Wealthcare’s household based rebalancing approach seeks to increase your after-tax wealth by locating your assets amongst your various accounts in a tax efficient manner. In addition, under Wealthcare’s approach, rebalancing events occur only when a threshold relative to your policy portfolio is exceeded, and the trades to bring the household back to target factor in taxes and commissions in an attempt to reduce slippage.

Based on the current market value of \$727,860, and the assigned risk allocation shown above, we forecasted the results over a 10 year period. Under the Client Summary page, a more detailed analysis is shown. On a post-liquidation basis, 0.39 or \$43,712 is forecasted to be added through Wealthcare’s household-based tax management method over the traditional approach.

Wealthcare Value Added Summary Over Traditional Approach

Annualized Value Added in Percentage
0.39

Value Added in Terminal Wealth (\$)
\$43,712

²¹ [1] Cochrane, John H. 1999. “New Facts in Finance,” *Economic Perspectives*, Federal Reserve Bank of Chicago, vol. 23, no. 3:6–58

Wealthcare Trading and Rebalancing Process

Initial Set Up: Intelligently applying asset location to a diversified portfolio is a complex, mathematically rigorous endeavor. Generally speaking, this benefit is achieved by placing the least tax-efficient assets in the accounts taxed most favorably, and the most tax-efficient assets in the accounts taxed least favorably, all while maintaining the desired asset allocation in the aggregate.

For each tax type we calculate after tax expected returns. In a tax exempt account, the after-tax return equals the total return. In a tax deferred account, we project growth of the asset by compounding the total return annually. At liquidation, we apply the ordinary tax rate to all of the growth. We use what is left of the growth after taxes to derive an annualized return, which is our post liquidation after-tax return. In a taxable account, we consider the dividend and capital gain component of the total return separately, with respect to both rate and timing. We project growth of the asset by taxing the dividend component annually at the ordinary rate or the qualified rate and adding back the after-tax dividend. Unrealized capital gains are deferred, and the long term capital gain is fully taxed at the preferential rate at the end of the period. We then derive the annualized return based on the after-tax value of the asset.

Dynamic Process: To maximize the asset location benefit, the household must be monitored in response to not only market movements and revised return expectations, but also the individual's cash flows throughout the entire investment period with the goal of maximizing ending wealth. One cannot simply set the asset location at inception and forget it. Deposits, withdrawals, rollovers, distributions, conversions and dividends will all shift the relative balance. These shifts can necessitate location adjustments, big and small. To successfully extract value added from asset location, the process needs to be maintained dynamically as assumptions change, tax rates change, tax brackets change, and tax preferences change.

In addition to seeking to add value through asset location, Wealthcare's trading and rebalancing process offers a myriad of benefits to add value to our clients. This is made possible by our internal trading group, proprietary trading system, and advanced algorithms.

The Benefits:

✓ Asset Location	Seeks to increase after tax wealth
✓ Tax Loss Harvesting	Ability to harvest losses while maintaining targeted asset allocation exposure and avoiding wash sale rules.
✓ Lower Transaction Costs	Management at the household levels enables Wealthcare to reduce the number of positions and in turn reduce transaction costs.
✓ Deferral of Gains	In the event of withdrawals or rebalancing events, Wealthcare monitors the timing of gains and is averse to realizing short term gains.
✓ Tax Sensitive Withdrawals	Ability to meet withdrawals by looking across different tax types and associated tax effects enables withdrawal activities in a more tax efficient manner.

Perception Hurdles:

The asset location process will inherently create dispersion between the different account types as they will have different asset allocations. For example, a taxable account may have a more aggressive stock / bond mix as compared to a more conservative tax deferred account. One should look at the entire household performance, and understand that the dispersion is a necessary effect in an attempt to increase household after-tax returns.

The asset location process is highly assumption dependent. Significant changes to one's individual tax situation, tax treatment of various account types as well as realized capital market returns will favorably or unfavorably effect the realized value added of asset location efforts.

Account Summary

ACCOUNT SUMMARY

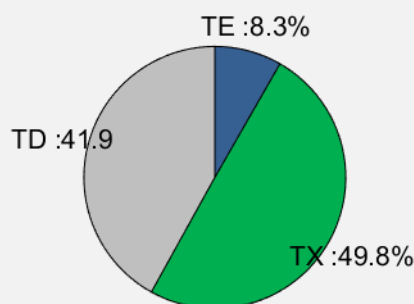
Here is a the list of the accounts and associated balances covered in this household by tax type as of January 3, 2020

<i>Account Name</i>	<i>Account Number</i>	<i>Account Type</i>	<i>Tax Type</i>	<i>Market Value (\$)</i>
Taxable	1	TX	TX	\$362,188
TaxDeferred	2	TD	TD	\$305,336
TaxExempt	3	TE	TE	\$60,336
<i>Total</i>				<i>\$727,860</i>

Accounts by Tax Type

ACCOUNTS BY TAX TYPE

The aggregated tax structure of the above accounts is shown by taxable, tax deferred and tax exempt entities.

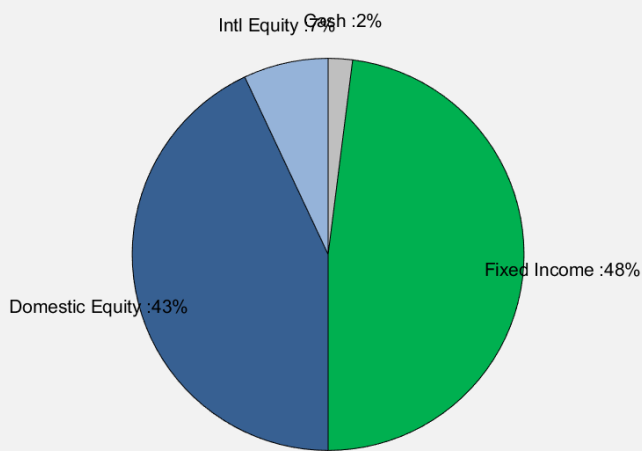


	<i>Taxable</i>	<i>Tax Deferred</i>	<i>Tax Exempt</i>	<i>Total</i>
# of Accounts	1	1	1	3
Market Value (\$)	\$362,188	\$305,336	\$60,336	\$727,860
% of Assets	49.8	41.9	8.3	100

Risk Allocation

RISK ALLOCATION

Risk allocation refers to your broad based stock / bond mix. Research has shown your risk allocation is the key driver of the future return and risk of your portfolio.



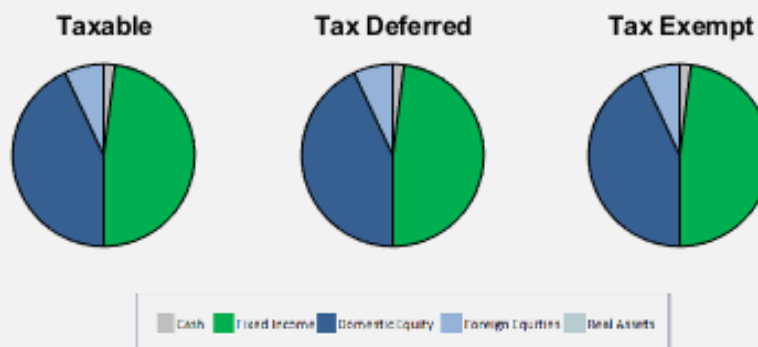
The broad based policy risk allocation is 2% cash, 48% bonds and 50% equities. Within your risk allocation, 43% is allocated to domestic equities and 7% to non-US equities. As a percent of the equity allocation, 86% is domestic oriented, and 14% is foreign equities. There is not a dedicated allocation to real assets in your policy asset allocation. Wealthcare's threshold based rebalancing is on domestic equities, international equities, fixed income, cash and real assets if applicable.

Traditional Allocation

TRADITIONAL ALLOCATION

Under a traditional allocation approach, each individual account is assigned to a model, whereby each security in the account is allocated a pro-rata interest in the model. This approach does not seek to add value through asset location.

Asset Allocation By Tax Type



Positions by Tax Type

Ticker	Description	Asset Class	Taxable	Tax Deferred	Tax Exempt	Total
CASH	Cash Equivalents	Cash	\$7,244	\$6,107	\$1,207	\$14,557
AGG	iShares Core US Aggregate Bond ETF	Aggregate Bonds	\$103,441	\$87,204	\$17,232	\$207,877
IEF	iShares 7-10 Year Treasury Bond ETF	7-10 year Govt Bond	\$22,166	\$18,687	\$3,693	\$44,545
VOO	Vanguard S&P 500 ETF	US Large Cap Equities	\$112,133	\$94,532	\$18,680	\$225,345
SPSM	SPDR Portfolio Small Cap ETF	Small Cap	\$21,804	\$18,381	\$3,632	\$43,817
IJH	iShares Core S&P Mid-Cap ETF	Mid Cap	\$21,804	\$18,381	\$3,632	\$43,817
VCIT	Vanguard Interm-Term Corp Bd ETF	Intermed. Govt/ Corp	\$48,243	\$40,671	\$8,037	\$96,951
DBEF	Deutsche X-trk MSCI EAFE Hedged Eq(DBEF)	International Equity	\$10,141	\$8,549	\$1,689	\$20,380
SCZ	iShares MSCI EAFE Small-Cap ETF	International Equity	\$5,071	\$4,275	\$845	\$10,190
VEA	Vanguard FTSE Developed Markets ETF	International Equity	\$10,141	\$8,549	\$1,689	\$20,380
Total			\$362,188	\$305,336	\$60,336	\$727,860

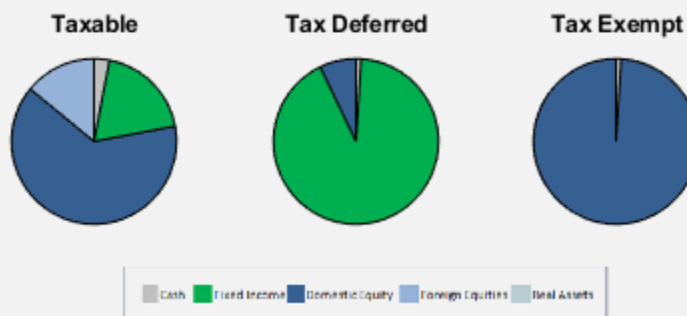
Wealthcare Allocation

WEALTHCARE ALLOCATION

Under Wealthcare’s household based rebalancing approach, accounts are allocated to the targeted household asset allocation while seeking to generate greater after-tax wealth through asset location. As such, accounts will have different asset allocations than the model and will, in all likelihood, have performance dispersion relative to the model.

Wealthcare’s household based rebalancing process utilizes threshold based rebalancing where rebalancing events occur only when the household is out of balance as opposed to calendar based rebalancing.

Asset Allocation By Tax Type



Positions by Tax Type

Ticker	Description	Asset Class	Taxable	Tax Deferred	Tax Exempt	Total
CASH	Cash Equivalents	Cash	\$10,900	\$3,053	\$603	\$14,557
AGG	iShares Core US Aggregate Bond ETF	Aggregate Bonds	\$0	\$93,482	\$0	\$93,482
IEF	iShares 7-10 Year Treasury Bond ETF	7-10 year Govt Bond	\$0	\$93,482	\$0	\$93,482
MUB	iShares National Muni Bond ETF	Munis	\$68,926	\$0	\$0	\$68,926
VOO	Vanguard S&P 500 ETF	US Large Cap Equities	\$143,777	\$21,836	\$59,733	\$225,345
SPSM	SPDR Portfolio Small Cap ETF	Small Cap	\$43,817	\$0	\$0	\$43,817
IJH	iShares Core S&P Mid-Cap ETF	Mid Cap	\$43,817	\$0	\$0	\$43,817
VCIT	Vanguard Interm-Term Corp Bd ETF	Intermed. Govt/ Corp	\$0	\$93,482	\$0	\$93,482
DBEF	Deutsche X-trk MSCI EAFE Hedged Eq(DBEF)	International Equity	\$20,380	\$0	\$0	\$20,380
SCZ	iShares MSCI EAFE Small-Cap ETF	International Equity	\$10,190	\$0	\$0	\$10,190
VEA	Vanguard FTSE Developed Markets ETF	International Equity	\$20,380	\$0	\$0	\$20,380
Total			\$362,188	\$305,336	\$60,336	\$727,860

Position Comparison By Tax Type

COMPARISON

The table below shows the traditional allocation compared to the Wealthcare implementation amongst the various tax types.

Ticker	Description	Asset Class	Traditional				Wealthcare			
			Taxable	Tax Deferred	Tax Exempt	Total	Taxable	Tax Deferred	Tax Exempt	Total
CASH	Cash Equivalents	Cash	\$7,244	\$6,107	\$1,207	\$14,557	\$10,900	\$3,053	\$603	\$14,557
AGG	iShares Core US Aggregate Bond ETF	Aggregate Bonds	\$103,441	\$87,204	\$17,232	\$207,877	\$0	\$93,482	\$0	\$93,482
IEF	iShares 7-10 Year Treasury Bond ETF	7-10 year Govt Bond	\$22,166	\$18,687	\$3,693	\$44,545	\$0	\$93,482	\$0	\$93,482
MUB	iShares National Muni Bond ETF	Munis	\$0	\$0	\$0	\$0	\$68,926	\$0	\$0	\$68,926
VOO	Vanguard S&P 500 ETF	US Large Cap Equities	\$112,133	\$94,532	\$18,680	\$225,345	\$143,777	\$21,836	\$59,733	\$225,345
SPSM	SPDR Portfolio Small Cap ETF	Small Cap	\$21,804	\$18,381	\$3,632	\$43,817	\$43,817	\$0	\$0	\$43,817
IJH	iShares Core S&P Mid-Cap ETF	Mid Cap	\$21,804	\$18,381	\$3,632	\$43,817	\$43,817	\$0	\$0	\$43,817
VCIT	Vanguard Interm-Term Corp Bd ETF	Intermed. Govt/ Corp	\$48,243	\$40,671	\$8,037	\$96,951	\$0	\$93,482	\$0	\$93,482
DBEF	Deutsche X-trk MSCI EAFE Hedged Eq (DBEF)	International Equity	\$10,141	\$8,549	\$1,689	\$20,380	\$20,380	\$0	\$0	\$20,380
SCZ	iShares MSCI EAFE Small-Cap ETF	International Equity	\$5,071	\$4,275	\$845	\$10,190	\$10,190	\$0	\$0	\$10,190
VEA	Vanguard FTSE Developed Markets ETF	International Equity	\$10,141	\$8,549	\$1,689	\$20,380	\$20,380	\$0	\$0	\$20,380
Totals			\$362,188	\$305,336	\$60,336	\$727,860	\$362,188	\$305,336	\$60,336	\$727,860

Assumptions

Asset Class Assumptions

<i>Asset Class</i>	<i>Long-Term Return</i>	<i>Yield (%)</i>
Cash	2.89	1.38
Aggregate Bonds	3.39	3.39
Treasury Inflation Protected	3.12	3.12
7-10 year Government Bond	3	3
High Yield Bonds	6.07	6.07
Municipal Bonds	2.82	2.82
High Yield Municipal Bonds	4.78	4.78
US Large Cap Equities	8.63	1.85
Domestic Equities	9.16	1.84
US Small/Mid Cap Equities	10.47	1.32
International Equities	8.63	3.27
Emerging Market Equities	9.48	2.51
REITs	7.65	4.43
Commodities	3.99	0

To simulate the after-tax benefit of asset location, each security is assigned to an asset class and the Wealthcare Capital Market Assumptions are applied. We apply Wealthcare's normative compounded or geometric returns assumptions over the first ten years of the forecasting horizon. The "total return" for each asset class is then deconstructed into two components: capital appreciation and yield. These two components are taxed differently (subject to both a different rate, and different timing) and this difference is a key driver of the value of asset location. The yield or income return will be taxed at ordinary rates or at qualified dividend rates contingent on the nature of the distribution.

Additional disclosures regarding the Wealthcare capital market assumption setting process can be found : https://cdn.financeware.com/docs/wcm_disclosures_inv_choice.pdf

Personal Tax Assumptions

It is assumed that the taxpayer remains in the same tax bracket for the entire horizon. The calculations assumes zero state and local taxes.

Federal Tax Rate (%)	25
Capital Gains Tax Rate (%)	10

Transaction Cost Assumptions

Assumptions (continued)

The transaction costs used to perform the analysis are below:

<i>Ticker</i>	<i>Description</i>	<i>Transaction Cost (\$)</i>
AGG	iShares Core US Aggregate Bond ETF	9
DBEF	Deutsche X-trk MSCI EAFE Hedged Eq(DBEF)	9
IEF	iShares 7-10 Year Treasury Bond ETF	9
IJH	iShares Core S&P Mid-Cap ETF	9
MUB	iShares National Muni Bond ETF	9
SCZ	iShares MSCI EAFE Small-Cap ETF	9
SPSM	SPDR Portfolio Small Cap ETF	9
VCIT	Vanguard Interm-Term Corp Bd ETF	9
VEA	Vanguard FTSE Developed Markets ETF	9
VOO	Vanguard S&P 500 ETF	9

Disclosures and Definitions

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Information contained herein is at a point in time and subject to change without notice.

Past performance is no guarantee of future returns.

Risk Disclosure

No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Asset Allocation may be used in an effort to manage risk and enhance returns. It does not, however, guarantee a profit or protect against loss.

All investments include a risk of loss that clients should be prepared to bear. The principal risks of the advisor’s investment services are disclosed in the publicly available Form ADV Part 2A.

The calculations contained in this report are highly dependent on assumptions including tax rates, dividend treatment and market returns. There is no guarantee that the estimates will be achieved. Actual results may be higher or lower and will vary depending on each investor’s personal circumstances including, but not limited to, time horizon, selected model, tax rate and distribution of assets amongst tax types. The “expected return” figures are empirically derived projections for what future returns might be, but actual returns will differ year-to-year. Wealthcare cannot guarantee that an investor will experience the value added numbers included in this report or that an investor’s accounts will be allocated in the most tax-efficient manner at all times. As a general matter, asset location strategies like the one implemented by Wealthcare distribute assets unevenly across multiple accounts based on the varying return profiles of each asset (separately considering the potential for capital appreciation and dividend yield).

Over shorter periods of time based on actual capital market returns, asset location may not maximize after tax returns. However, the longer the investing period, the more likely it is that the relative performance of the various assets in the portfolio will converge on what is expected.

The calculations used in this report seek to compare the method of Wealthcare’s household based rebalancing approach to a traditional account based approach. The calculation utilizes the expected returns for each asset class using Wealthcare’s normative Capital Market Assumptions, and assumes that each asset class achieves these returns every year over the course of the selected time horizon. For a given security, returns and taxation applied are a function of their asset class and not a function of the individual securities’ expected growth and tax attributes. Actively managed mutual funds and ETFs are assigned higher turnover rates which causes greater tax costs if held in a taxable account. Actual returns year-to-year will diverge as they exhibit volatility. These calculations do not attempt to show how a Wealthcare portfolio is expected to perform as compared to a benchmark or an alternative portfolio. Under the traditional approach, each account is assigned to a model. Furthermore, under the traditional approach, calendar based rebalancing is implemented whereas Wealthcare employs a threshold based rebalancing approach.

Where allowed by the client, the Wealthcare Household based approach utilizes municipal bonds in taxable accounts. In contrast, the traditional approach will utilize taxable bonds in taxable accounts.

Distributions such as dividend income and income payments are taxed at the highest federal tax-rate prevailing for each type of distribution. After-tax proceeds from those distributions are reinvested in the security. State and local taxes are ignored. The calculation does not reflect the tax effects of the alternative minimum tax, exemptions, phase-out credits, or any individual-specific issues.

Neither the calculations itself, nor anything written herein should be interpreted as tax advice. Wealthcare does not represent in any manner that the tax consequences described herein will be obtained, or that any Wealthcare product will result in any particular tax consequence. Please

Disclosures and Definitions (continued)

consult your personal tax advisor as you see fit regarding your particular tax circumstances. The tax consequences of asset location are complex and uncertain. You and your tax advisor are responsible for how transactions conducted in your account are reported to the IRS on your personal tax return. Wealthcare assumes no responsibility for the tax consequences to any client of any transaction.

The analysis does not include expected future cashflows such as saving or future expense which may be included in a Wealthcare plan.

Definitions

Transaction Costs: Commissions incurred to buy or sell a security when a rebalancing event occurs are factored in the analysis. Transaction cost data is taken from the respective custodian.

Taxes Before Liquidation: Taxes Before Liquidation is an estimate of how much in taxes will be incurred throughout the analysis. Taxes incurred results from 1) rebalancing trades, 2) dividend and ordinary income distributed for holding the underlying securities in taxable accounts. Rebalancing trades will incur capital gains expense given that the rebalancing sell transaction occurs in the taxable account where there are unrealized gains. Dividend and ordinary income distribution will incur taxes in the event they are paid in the taxable account. This dollar amount is then multiplied by the applicable assumed tax rate, factoring in favorable QDI treatment where appropriate. If the income were received in a tax favored account, there would be no taxes assessed. To the extent that dividends are paid in a Tax-Deferred account such as a Traditional IRA, these taxes are deferred for the duration of investment horizon. In this case, the portfolio will benefit from the ability to reinvest the tax savings and compound that growth, before eventually paying tax upon liquidation. If the dividends or income is paid in a tax exempt account such as a Roth IRA, the taxes are avoided permanently.

Pre-liquidation Ending Wealth: The projected pre-liquidation return reflects the growth of the assets over the stated horizon. It accounts for the taxation of dividends/coupons and capital gains distributions from the fund as well as capital gains resulting from rebalancing transactions. However, it does not account for liquidation of the funds at the end of the horizon to fund consumption. This is in contrast to post-liquidation analysis where the assets are liquidated and taxed based on the appropriate tax entity.

Pre-liquidation Total Return (%): Annualized after tax returns calculated based on projected pre-liquidation ending wealth.

Post-liquidation Ending Wealth: The post-liquidation is based on the projected pre-liquidation return, but then factors in the assumed tax effects for an investor who liquidates the assets at the end of the time period. Here, the investor will incur capital gains taxes for assets held in a taxable account. For tax deferred accounts, the entire asset value will be taxed at assumed ordinary tax rates, and tax-exempt assets will not be taxed.

Post-liquidation Total Return (%): Annualized after tax returns calculated based on projected post-liquidation ending wealth.