Asset Management for High Net Worth Investors from the Investment Firm Perspective

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What I Want to Cover in This Session

- Crucial differences between managing institutional assets and high net worth clients
  - Changing preference functions through the life cycle
  - Lifestyle and wealth transfer considerations in asset class selection
  - Need to deal with concentrated legacy positions
- Portfolio management as a manufacturing exercise
- Two key tools:
  - Tax Sensitive Portfolio Optimization
  - Analytic Hierarchy Process
The Challenge of Private Clients

- Private clients are heterogeneous. They require a high degree of customization
  - Most investments are taxable, and taxes are a vastly bigger issue than the transaction costs that all investors face
  - Private investors will have different pools of wealth set aside to fund specific consumption events
  - Investor preference functions evolve during a finite life span. The goals and objective will be constantly changing
  - The desire to liquidate investment assets for consumption is less predictable than institutions
  - Too much similarity among multiple private client accounts can be considered an illegal, unregistered mutual fund by the SEC
Good practices for Private Clients

• Even very wealthy individuals rarely have a staff of investment experts and consultants to help them create sound investment policies

• It is incumbent upon the investment firm to act in a greater fiduciary capacity
  - Clients have to be educated about the economic ramifications of policy decisions in an after-tax context, particularly the pros and cons of active versus passive management of taxable assets
  - You can’t assume that if an investor buys into your investment product that it’s the right product for them

• For institutional portfolios, the intellectual capacity of the investment firm can be concentrated on the investment markets. For high net worth individuals equal attention must be focused on constant adaptation to client needs and preferences
Checklist for institutional managers taking on a private client

• Private client objectives are not easily summarized in conventional benchmark indices
  - What is the economic meaning of “after-tax” tracking error?
  - “Suitability” means as much as optimality

• Taxes are a key driver
  - Use effective tax rates for asset allocation decisions
  - Run security portfolios with tax-efficiency in mind
  - Tax “alpha” is real, consistently available and large (30 to 100 bps)

• Asset managers have a fiduciary duty to advise clients sensibly
  - What’s your realistic expectation of your active management alpha after taxes? If it’s negative, passive management is the way to go

• The volatility of after tax returns is reduced proportionately to the effective tax rate
More issues for institutional managers taking private clients

• **Risk management policies matter even more for taxable investors.**
  - It can be very expensive to revise asset allocations

• **Private clients often have large concentrated positions as a result of inheritance or business ownerships**
  - Any transition strategy must weigh taxes carefully against the improved compounding through lower risk

• **Private clients care a lot about absolute return and risk**
  - You need cash for spending
  - Taxes are levied on absolute profits, not index relative profits
Portfolio management as a manufacturing exercise

- “Mass customization” is the key to managing large volumes of high net worth clients. Separate the investment process into three distinct roles
  - Client relationship to define client needs and wants
  - Investment research and “best ideas” investment models
  - Adaptation of “best idea models” to individual client needs. This is the usual bottleneck for large volumes, but it can now be effectively automated

- Most firms do a poor job with private client accounts
  - Taxes are often ignored, or treated as a last minute afterthought
  - Or they use taxes as an excuse to do “pseudo passive” management at active management fees
Tax Aware Investing is a Challenge Worthy of Pursuit

• Active Strategies that produce excess returns pre-tax may still produce negative excess returns after-tax

• Taxable Accounts are labor intensive
  - Each account is different
  - Accounts may be started with different positions
  - Even identical accounts started on different dates will have different cost basis and tax consequences
Private Taxable Investors

- **Individuals**
  - Ultra High Net Worth / Family Office
  - High Net Worth / Bank Trust

- **Separately Managed Account Programs**
  - Large Volume of Accounts
  - But it’s where the market is headed. SMA assets expected to go from $600B to $2.6T in the next 5 years (Paul Fullerton, Cerulli Associates)
Do Taxes Really Matter?

- Pre-Tax and After-Tax Returns on Mutual Funds are Almost Unrelated
  - Peterson, Pietranico, Riepe and Xu “Explaining After-Tax Mutual Fund Performance”, FAJ, January 2002
    - Persistence in after-tax performance
    - Net redemptions hurt, especially in large cap value
    - Investment style and risk level impact after tax returns
    - Turnover is not a determinant of after-tax returns

- Tax Managed Mutual Funds and the Taxable Investor, shows Huge Value of Tax Management
  - KPMG, Edited by Neil Wolfson
What Do We Do About Taxes?

- We’ve been thinking about it a long time
  - Elliman of Stillman-Rockefeller showed with computer simulations that stocks must be severely overvalued to be worth selling in taxable accounts for our conference in 1989

- Rigorous Mathematical Analysis

- Index Funds
Not Much Other Research

• Academic Studies
Simple Answer

• **Don’t Ever Sell Anything**
  - This works for an index funds as long as there is net positive cash flow into the fund. Even for index funds, trade-offs are needed to deal with net negative cash flow
  - The pseudo-passive account became standard for private account managers
  - Doomed to underperformance with active fees for passive management. Clients aren’t that dumb any more.
HNW Current Approach Level 0

- Ignore taxes altogether
- Liquidate existing portfolios of new investors and start fresh
  - Potentially generates large tax liabilities
- Only benefit over a mutual fund is the ability to pass tax losses as well as tax gains through to the investor
HNW Current Approach Level .5

- Apply some tax management approach to a model account
- Keep all separate accounts identical after that
- Still requires liquidation of pre-existing accounts
- Very sub-optimal as new accounts open at different dates, with different cost basis in positions and different tax circumstances. No individual investor has the “average” tax circumstances
- Only advantage over a “tax sensitive” mutual fund is ability to pass through losses
Use a model account but do year-end tax “loss harvesting”
Still requires liquidation of pre-existing accounts
Since different clients started accounts on different dates with different cost basis, accounts will be heterogeneous with respect to losses.
Use proceeds of sales to buy an index ETF. Hold ETF 31 days, sell and replace with whatever stocks are needed to return to conformity with the current state of the model account
Disrupts investment strategies during the “wash sale” period
Potential tax liability on sale of the ETF if the market has risen while you held ETF
Missed all the opportunities for tax benefits due to temporary declines in stock prices during the year
• Use model account, with rule based methods to prevent “tax dumb” transactions
• Example: don’t sell stocks at a gain if the position has been held for more than ten months but less than twelve months
• You can apply rules to pre-existing holdings but as there are no explicit economic trade-offs (taxes, expectations of risk and return), it’s very hard to “migrate” pre-existing accounts in an automated way
• Rules must be customized to each manager’s style (value, growth, low turnover, high turnover, trading urgency, typical liquidity) or they can easily interfere with investment strategies
• Over time accounts will be come different without a traceable economic rationale for the differences
HNW Current Approach Level 3

- Full blown “loss harvesting”. Logic comparable to “tax swaps” in municipal bond portfolios.

- Sell a stock every time it drops a specific percentage below cost, “banking tax losses”

- May lead to unnecessary transaction costs (no need to harvest losses in a down market) and opportunity costs associated with the wash sale period

- Works best with long horizon value strategies for large cap US equities (insensitive to time of purchase, low trading costs)
HNW Current Approach Level 4: Doing it Right Seems Complex

- Real tax-aware optimization to explicitly and consistently consider the investor goal to maximize the expectation of risk-adjusted return net of costs
  \[ U = E [ R - S^2/T - (C * A)] \]
- We must simultaneously consider a lot of things
  - Return and Risk Characteristics of the Portfolio
  - Tax Lot by Tax Lot Tax Considerations
  - Minimize the Cost of the Tax Spread (Pre-Tax to After-Tax)
  - Provide for Minimal Inhibitions to the Active Investment Strategy (e.g. not limit turnover)
  - Be able to be Highly Automated to Allow Efficient Processing of Thousands of Accounts
Our Involvement Begins in 1996

• In 1996 a client from a quant firm turned up at my Boston office
  - He asked if our technology could be easily adapted to taxable accounts
  - Stupidly, I said “YES”. Having known this person for many years, I should have known better

• We reviewed the academic literature and didn’t find too much that was of practical use
  - We did find one promising technique and built a prototype within six weeks

• Since then we’ve learned a great deal about how to optimally manage taxable accounts
The Breakthrough

• A Team from J P Morgan came up with the first practical answer

• Treat Capital Gains Taxes as Large Transaction Costs on Position Closing Trades (usually sales) only
  - Represent Different Tax Lots as Different Securities to Allow Different Transaction Costs (Taxes) for each Lot.

• This representation is not immediately compatible with commercially available “factor” risk models that assume asset specific risks are independent (IBM Lot 1 is obviously not independent from IBM Lot 2)
  - You can convert your risk model data to the mathematically equivalent full covariance matrix
Key Concept: Automate Tax Awareness

• Do Not Try to Limit Turnover, Use It
  - Actively Offset Capital Gains and Capital Losses
  - Imagine a stock on which you have a “sell” rating but it has an unrealized capital gain. Find another with a “sell” or “neutral” rating and a capital loss
  - Sell Both. Now you have fresh cash to invest in new “buy” rated stocks and you’ve offset the taxable gain on one position with the losses from the other

• This is a simple example.
  - Imagine doing all possible combinations of 200 different tax lots of 50 different stocks. Definitely has to be computerized

• A Wide Range of Active Strategies can be Accommodated
Some Practical Considerations

• Even fundamentally driven strategies can use tax aware optimization to index track the “best ideas” model portfolios for different clients

• Be Tax Aware
  – Adjust alphas to reflect expected after-tax dividend stream
  – Treat capital gain taxes as big transaction costs
  – Amortize taxes to reflect portfolio turnover, compounding value of tax deferral, and likelihood of stepped up cost basis

• Deal with client heterogeneity
  – Adjust risk aversion different risk absolute and index relative preferences across clients
  – Adapt number of stock names to different portfolio sizes
  – Build in compliance constraints such as social responsibility restrictions

• Stock universes with higher cross-sectional dispersion (e.g. small cap) increase the value of the tax deferral option
The Technology is Proven

- Since 1997, Northfield and other firms have commercialized enhanced versions of the JP Morgan concept
  - Modeling capital gains taxes as linear piecewise transaction costs allows for multiple tax lots, but also allows for use of commercial “factor” style risk models
  - Build in algorithms to handle wash sales, wash sale opportunity costs and rounding to round lots
  - Provide for explicit tradeoffs between expected return attractiveness, portfolio risk and taxes
  - Also handles other types of heterogeneity (i.e. my grandmother was run over by a Pepsi-Cola truck)
First Level Subtleties

• It’s a multi-period problem
  - Returns accrue wealth over time
  - Portfolio volatility risk is experienced over time
  - Taxes and trade costs occur at moments in time
  - Incremental taxes for short-time gains as compared to long term gains
  - My market outlook may change tax preferences

• Wash sales
  - Potential loss of previously realized tax losses
  - Wash sale opportunity costs
Basic Solution to the Timing Issues

• Amortize all costs over expected life
  - Long term capital gains taxes over expected time horizon (average holding period)
  - Incremental taxes on short term gains amortized over time before getting long term status on the position
  - If explicit returns forecasts are available, consider the opportunity cost of not owning a high-return stock in order to harvest a tax loss
  - Use appropriate geometric, not the linear amortization rate

• Adjust the amortization rate to reflect the probability of realizing improved returns or lower risks during the investment time horizon
  - I have a forthcoming paper on this issue
Further Adjusting Amortization Rates

• Investors may wish to adjust amortization rates to reflect various circumstances
  - Possibility of escaping capital gains taxes through bequest
  - Deferral of tax payments is worth more when interest rates are high
  - Investors learn whether the market is up or down for the year. They can adjust tax preferences to reflect having net gains or losses as the year progresses
  - Market expectations. Investors’ preferences for taxes may change if they have a bullish or bearish view of the market
Style Biases

- **Momentum strategies naturally provide a degree of tax deferral**
  - Keeping what’s going up (defer capital gains) and sell what’s gone down (realize capital loss)

- **Value Strategies magnify tax problems**
  - Selling what’s gone up (realizing capital gains) and keeping what’s gone down (defer capital losses)

- **Bottom up fundamental strategies are harder to tax-manage**
  - There are an almost infinite number of combinations of stocks will give you a particular size, value/growth and earning tilt.
  - Tough to sell IBM even if you hate it if your cost basis is zero
Performance Reporting

• Former CFA Institute Performance Presentation Standards simply require reporting period returns net of taxes accrued on net realized gains

• Revised standards as of 2003 recommend but not require measurement of contingent tax liabilities. No formulation has yet been accepted as to how to incorporate the contingent tax liabilities into reported performance figures

• Some industry participants are advocating “full liquidation” computation of after-tax return. Assume the portfolio is liquidated at every measurement date, and calculate the percentage change in net value from period to period, adjusted for cash flows.
Benchmarks

• Standard benchmarks such as the S&P 500, FT and Russell indices don’t work
  - After-tax returns on the index depend on the cost basis of the positions which is dependent on the date when the account was set up. The after-tax return for the S&P 500 index is different for an account set up in 1990 and another set up in 1995.
Tax Alpha is A Big Deal

- Horvitz, Jeffrey and Jarrod Wilcox, “Know When To Hold ‘Em and When to To Fold ‘Em: The Value of Effective Taxable Investment Management”, Journal of Wealth Management, Fall 2003
  - Used long-term Monte Carlos simulations on a single asset portfolio (e.g. buying and selling in and out of the same mutual fund). Real portfolios have much greater potential savings.
  - Sensible tax management practices reduced federal taxes about 100 basis points per annum under the old tax law, about 75 basis points under the latest revisions.
  - Shows that tax deferral is not a tax free loan from the government. Rather the government has a subordinated carried interest like a limited partnership. By deferring taxes, wealth grows more quickly which could lead to eventually larger taxes upon termination.
“Manufacturing” the really custom solution

- You can “manufacture” some very sophisticated cases
  - Offsetting capital gains and losses across asset classes
  - Provide a “tax efficiency overlay” service for clients with external managers
  - Finding the globally optimal solution across the multiple portfolios of an entire family, each with its own tax circumstances and constraints
- Gradual transition of concentrated legacy portfolios
  - Exploring the tax/risk efficient frontier to maximize long term wealth accumulation for transition of legacy portfolios
  - A leveraged complementary fund is a more aggressive version
Private Clients Have Complex Preferences

- Institutional investors have liabilities that are usually clearly defined both in magnitude and time. Not so for private individuals.
- Private clients often have complex financial preferences that can cross many lives and even generations.
- Many preferences are not easily expressed in a quantitative form that can be reduced to MVO parameters.
- Enter the Analytic Hierarchy Process.
AHP is a methodology that arises from operations research literature. AHP is used as a non-parametric method for making complex, often qualitative decisions in a robust, consistent fashion.

Thomas Saaty, a professor at the University of Pittsburgh, developed the AHP as a way to improve complex decision making and to identify and weight selection criteria.

Often used for things like how to decide where to put a large industrial plant. Lots of things to worry about: labor, suppliers, transportation, taxes. And once you build it you can’t move it.
Analytic Hierarchy Process: Mechanics

- For each evaluation criterion, usually expressed as a multiple choice question, the AHP creates a comparison matrix.
- The upper triangle holds the relative ratings (1-9, with 1 being best) of the alternatives: asset classes or fund managers.
- The diagonal of the matrix is ones – every fund compared with itself is a 1!
- The lower triangle is the reciprocal of the upper triangle: \( x(i, j) = 1 / x(j, i) \)
  - If A is 9 times as good as B, then B is 1/9 as good as A
Analytic Hierarchy Process: Mechanics

• When the comparison matrix has been filled, the matrix’s first eigenvector will contain the weights to assign to each choice.

• For this application we use these weights as the asset class or manager allocation for that criterion.

• The portfolio weights for each criterion are then averaged using the weight for each criterion.

• It’s a form of “importance weighted” average score.
AHP Isn’t New To Investments,


- We’ve had excellent success building AHP models for asset allocation for a variety of private client wealth levels
Conclusions

- Asset management firms that serve an HNW clientele must put as much effort into portfolio adaptation as into investment research.
- Lots of good theory and “best practices” have been developed in recent years on how to manage taxable private clients.
- Asset allocation and security portfolio strategies can reliably obtain economically substantial “tax alpha”.
- The Portfolio Manufacturing paradigm allows best practices to be implemented cost effectively for large sets of heterogeneous clients.
  - Tax aware optimization can be applied to manage for after-tax return at the security level.
  - The Analytic Hierarchy Process can be used very effectively to broaden the context of asset allocation to address the complex needs and preferences of private investors.