

# Enhancing Tax Alpha Using Everyday Client Workflows

June 17, 2020

# Today's Presenters

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# Agenda

- **Tax-Sensitive Portfolio Manager Needs**
- **What is Tax Alpha and How Do You Enhance it?**
- **Tax-Managed Workflows**
  1. Withdraw cash with minimal tax impact
  2. Minimize model drift and tax drag
  3. Transition tax-efficient legacy accounts
  4. Rebalance SMAs with a tax-aware focus
- **APIs: Scaling the Process**

# Tax-Sensitive Portfolio Manager Needs

# Tax-Sensitive Portfolio Manager Needs

- **Manage realized taxes**
  - > Loss harvesting, gain avoidance, gain/loss targets, offset gains and losses
- **Manage cash flows with minimal tax impact**
  - > Withdrawals, contributions
- **Manage risk**
  - > Minimize risk or tracking error, or target a specific level
- **Minimize transaction costs**
  - > Ticket charges, stamp taxes, broker costs, impact costs, etc.
- **Ensure guardrails are satisfied**
  - > Asset/issuer bounds, active risk, realized gains, names traded, names sold, names held, etc.

# What is Tax Alpha and How Do You Enhance it?

# What is Tax Alpha and How Do You Enhance it?

## What is tax alpha?

- > Tax alpha is the value added to the portfolio's return by utilizing sound tax-saving strategies
- > Tax alpha protects the portfolio's return and generates a boost by ensuring that taxes don't eat away from current and future returns

## How do you enhance tax alpha?

- > Reduce or eliminate current capital gains taxes
- > Delay the payment of capital gains taxes to future years
- > Harvest losses to offset capital gains in future periods
- > Rebalance frequently to take advantage of loss harvesting opportunities
- > Manage benchmark or model portfolio changes with a tax-aware mindset
- > Manage efficient cash flow to avoid net capital gains
- > Manage taxes and wash sales within UMAs or any related SMAs with the same tax ID

# #1 Tax-Managed Workflow: Withdraw Cash with Minimal Tax Impact



## Withdraw Cash With Minimal Tax Impact

### **Liquidating securities to generate cash requires balancing immediate tax consequences with longer-term investment goals**

- > Manual approaches for raising cash include ad hoc rules such as:
  - > Selling tax lots with losses irrespective of their distance from the target allocation
  - > Selling portfolio overweights irrespective of their gain/loss status to improve model alignment
- > There are many possible combinations to be considered!
- > Trial and error analysis is time-consuming and error-prone
  - > Too much focus on taxes may lead to significant model drift and poorer investment performance
  - > Too much focus on model alignment may lead to higher than necessary taxes

## Withdraw Cash With Minimal Tax Impact

**An optimizer can automatically evaluate many more possibilities.**

- > Basic optimizers can efficiently find portfolios that manage model alignment
- > Taxable optimization modeling adds significant complexity to the basic portfolio rebalancing problem
- > To balance model alignment and tax consequences, an optimizer with discrete (or combinatorial) optimization capabilities is required

## Tax-Aware Portfolio

### **Large Cap US Equity Portfolio tracking the STOXX® USA 500**

- > Portfolio Incepted in 2004 and rebalanced quarterly
- > \$64M total value
- > 350 Names, ~3500 holding lots
- > \$4.3M in Unrealized Losses
- > \$30M in Unrealized Gains
- > Tracking error to the benchmark on 3/31/2020 is 0.49%

### **Strategy requirements**

- > Hold at most 350 names
- > Trade at most 100 names in any rebalancing
- > No trades smaller than 0.1% of portfolio value
- > Asset bets to model of at most +/- 1%
- > Sector Bets of at most +/- 0.5%

## Example: Withdraw \$5M Cash on 3/31/2020

	Tracking Error	Net Tax Gains
<b>Initial Portfolio</b>	0.49%	\$0.00
<b>Non tax-aware Optimization Min Tracking Error Sell Only</b>	0.28%	\$269,000
<b>Non Tax-Aware Optimization Min Tracking Error Buy and Sell</b>	0.23%	\$371,000
<b>Tax-Aware Optimization Min Net tax Gains</b>	1.31%	-\$3,100,000
<b>Tax-Aware Optimization Sell Only Min Gains and TE</b>	0.29%	-\$500,000
<b>Tax-Aware Optimization Buy and Sell Min Net Tax Gains and TE</b>	0.23%	-\$500,000

## #2 Tax-Managed Workflow: Minimize Model Drift and Tax Drag

## Minimize Model Drift and Tax Drag

**In the absence of inflows and outflows, portfolios still need to be rebalanced periodically to maintain alignment with their underlying model**

- > If rebalancing is performed without attention to taxes, the tax cost can be significant

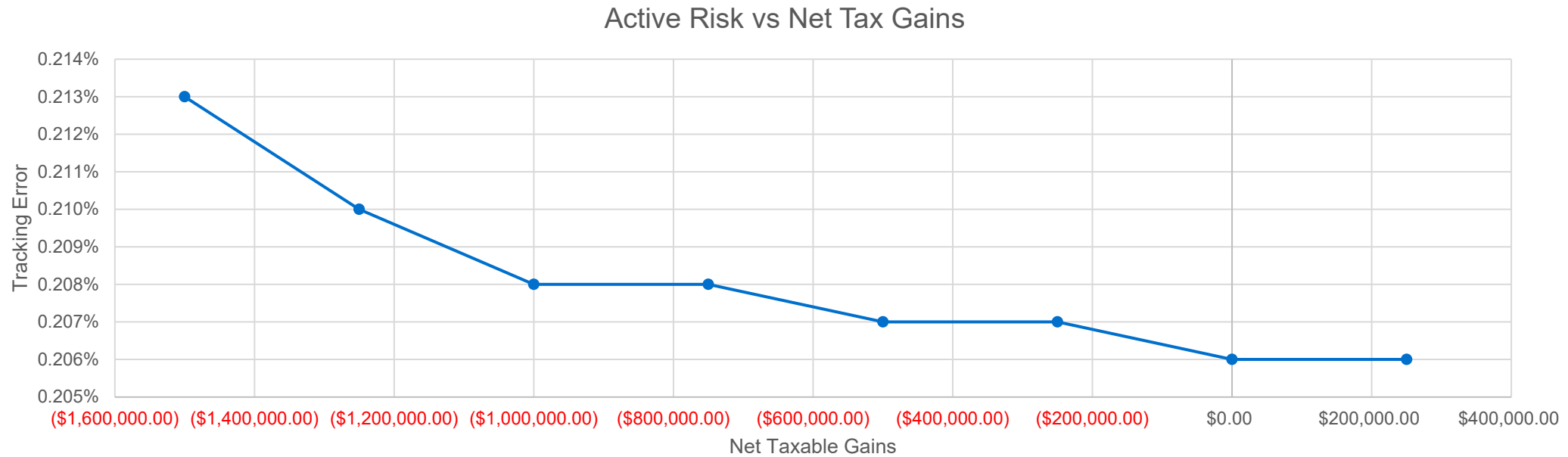
**Optimization enables analysis of the rebalancing from multiple perspectives**

- > Set a fixed budget for taxable gains and find the trade list that gives the minimum drift within that budget
- > Set a guardrail around the target allocation, and find the trade list that gets the portfolio inside the guardrail at minimum tax cost
- > Explore a spectrum of potential trading choices with different tradeoffs between tax costs and model drift

## Example: Rebalance on 3/31/2020

	Tracking Error	Net Tax Gains	Turnover
<b>Initial Portfolio</b>	0.49%	\$0.00	0%
<b>Minimize Tracking Error Net Tax Gains <math>\leq 0</math></b>	0.206%	\$0.00	15.0%
<b>Minimize Net tax Gains Tracking Error <math>\leq 0.21\%</math></b>	0.210%	-\$1,250,000	16.4%

# Example: Tracking Error – Net Tax Gains Frontier



Source: Axioma Portfolio Optimizer™



# #3 Tax-Managed Workflows: Transition Tax-Efficient Legacy Accounts

## Transition Tax-Efficient Legacy Accounts

- > The client has a \$7,791,842 Blue Chip account containing 20 securities
- > The account had no benchmark or risk constraints
- > They want to transition it to a direct index account versus the STOXX® USA 900
  - > The account has a tracking error of 5.36% versus the STOXX USA 900

- > Unrealized gains and liquidation cost

Unrealized Gains/Losses	
Short-term Gains	\$8,609
Short-term Losses	\$241,236
Long-term Gains	\$3,011,425
Long-term Losses	\$143,019
<b>Liquidation Cost</b>	<b>\$527,155.73</b>

- > Liquidating the account would cost them \$527,155 (approx. 6.8% account's value)
- > They want to see a few scenarios on how to reduce their liability and also transition to a direct indexing strategy

## Transition Tax-Efficient Legacy Accounts

- > There are \$384,254 in losses valued at \$797,198
- > The value of the positions that offset these losses is \$1,248,466
- > Totaling \$2,045,663 in cash to re-invest to minimize the active risk
- > This method produces zero tax liability with an active risk of 4.05% versus the STOXX 900 USA

- > Unrealized gains and liquidation cost

	Value	Gain/Loss value
Securities with losses	\$ 797,197.83	\$ (384,254.87)
Securities offsetting losses	\$ 1,248,465.98	\$ 383,816.00
	\$ 2,045,663.81	\$ (438.87)

- > Transitioned portfolio has 124

## Two Ways to Transition Tax-Efficient Legacy Accounts

### 1. Keep all legacy holdings and minimize the tax liability for various tracking error levels

- > This method is commonly used when you need to incorporate the legacy holdings in your newly created managed account
- > It allows us to look at the trade-offs between tax liability and the combined tracking error

### 2. Fully transition as much of the legacy account for different tax liability values

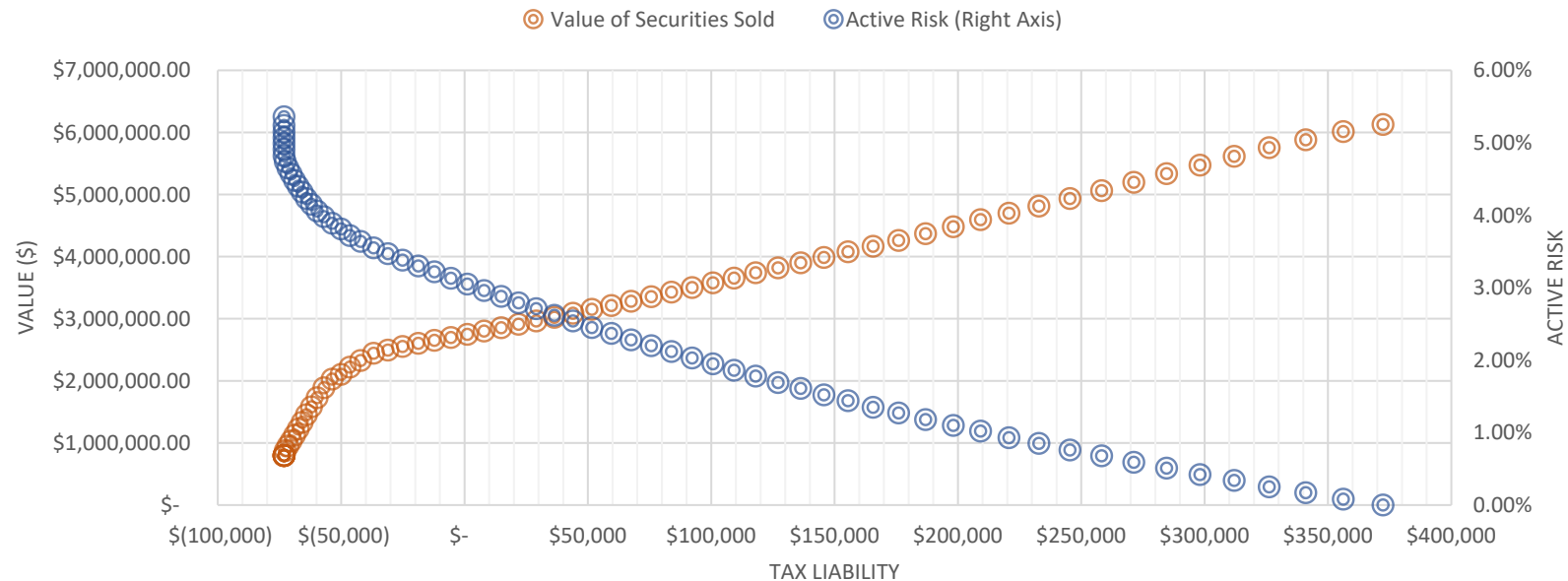
- > This method is commonly used for clients who are comfortable splitting their legacy portfolio into two accounts:
  - > Transitioned SMA
  - > Legacy holdings not transitioned

# Transition Tax-Efficient Legacy Accounts

## Keep all legacy holdings and minimize the tax liability for various tracking error levels

- > We ran 58 optimizations with the objective of minimizing tax liability
  - > Each optimization had a tracking error limit range from 0 to 5.36% versus the STOXX® USA 900
  - > Negative liabilities are just a tax credit for future tax bills

### Minimize Tax Liability for different Active Risk Levels



Source: Axioma Portfolio Optimizer™

# Transition Tax-Efficient Legacy Accounts

## Below are 5 example scenarios that can be presented to the client

- > Lowest active risk with no tax liability
- > Tax liability for 0% tracking error
- > 3 balanced trade-offs between tracking error and liability
  - > Each increases by roughly 60 bps in active risk

Scenarios	Tax Liability	Active Risk (%)
\$0 Tax Liability	\$0	3.05%
Balanced Trade-Off 1	\$51,642	2.45%
Balanced Trade-Off 2	\$109,290	1.86%
Balanced Trade-Off 3	\$175,987	1.27%
Lowest TE	\$372,298	0.00%

# Transition Tax-Efficient Legacy Accounts

**Goal: Fully transition as much of the legacy account for different liability values as possible**

- > Transferring securities from the legacy account
- > Selling legacy account securities and using the proceeds to fund the transitioned SMA
- > The Axioma Tax Optimizer can manage both accounts concurrently in one optimization
  - > This is done using the Axioma Multi-Portfolio Optimizer with two accounts
    - a) The first account is the legacy account
    - b) The second is the transitioned SMA

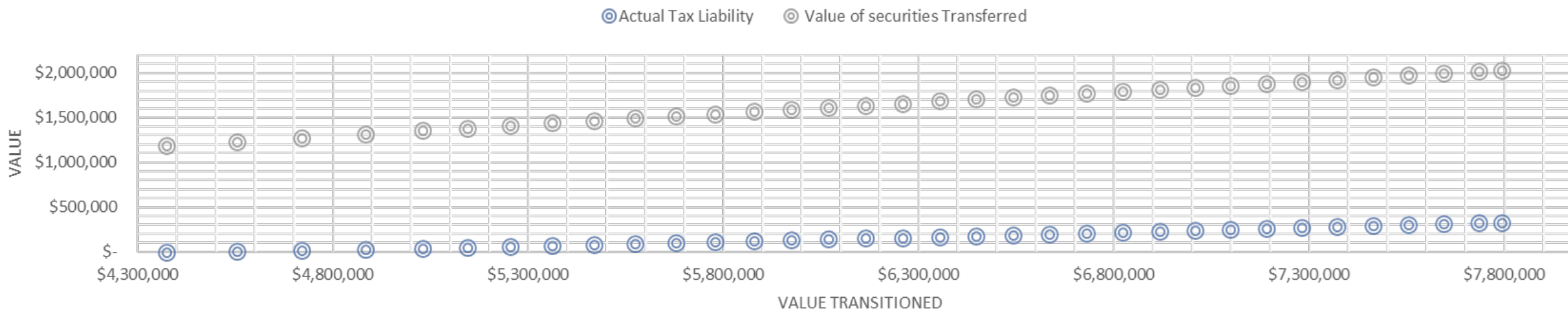
# Transition Tax-Efficient Legacy Accounts

Ran 34 multi-portfolio optimizations to maximize the value of the transitioned account

**Goal: Make transitioned portfolio as large as possible and within 25 bps of the STOXX® USA 900**

- > Transferring securities from the legacy account
- > Selling legacy account securities and using the proceeds to fund the transitioned SMA

Min Tax Liabilities for each transitioned value



Source: Axioma Portfolio Optimizer™



# Transition Tax-Efficient Legacy Accounts

## Below are 5 example scenarios that can be presented to the client

- > Lowest active risk with no tax liability
- > Tax liability for tracking error within 25 bps
- > 3 balanced trade-offs between tracking error and liability
  - > Each increases by \$500,000 in transitioned Value

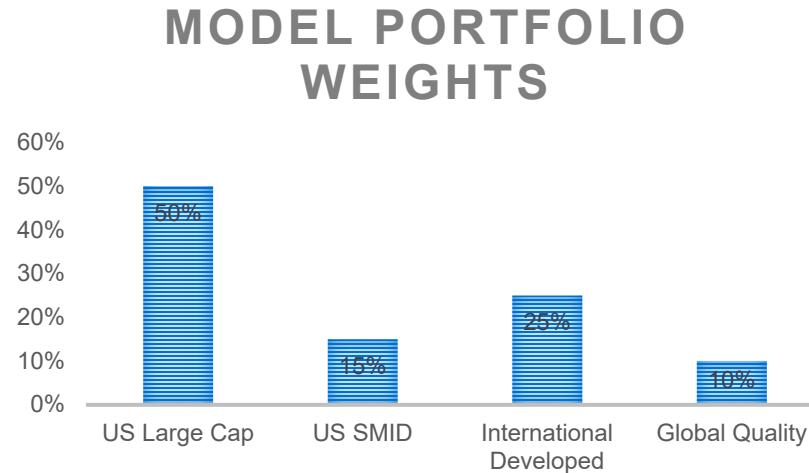
Scenarios	Actual Tax Liability	Transitioned Value	Legacy Account TE	Transitioned TE	Combined TE
\$0 Tax Liability	\$0	\$4,373,702	10.22%	0.25%	4.53%
Balanced Trade-Off 1	\$29,985	\$4,883,785	11.54%	0.25%	4.36%
Balanced Trade-Off 2	\$69,968	\$5,360,560	12.22%	0.25%	3.88%
Balanced Trade-Off 3	\$119,221	\$5,877,069	13.27%	0.25%	3.33%
Lowest TE	\$326,857	\$7,791,842	19.97%	0.25%	0.25%

# #4 Tax-Managed Workflows: Rebalance SMAs With a Tax-Aware Focus

# Rebalance SMAs With a Tax-Aware Focus

- The client has an aggregate portfolio managed against a model portfolio composed of 4 investment styles

- Model Portfolio Allocation:



- The aggregate portfolio is composed by 4 SMAs
  - US Large SMA is managed against the STOXX® USA 500 Index
  - US SMID SMA is managed against the STOXX® USA 400 Index
  - International Developed SMA is managed against the STOXX® Global 1800 Index
  - Global Quality SMA is managed against the STOXX Global Axioma Quality Index

## Rebalance SMAs With a Tax-Aware Focus

- All 4 SMA accounts are managed concurrently relative to the model portfolio
- Each SMA is also managed relative to its respective STOXX Benchmark
- This is done using the Axioma Multi-Portfolio Optimizer
  - To manage wash sales across the accounts
  - Reduce tax impact by transferring securities between accounts versus selling them

## Rebalance SMAs With a Tax-Aware Focus

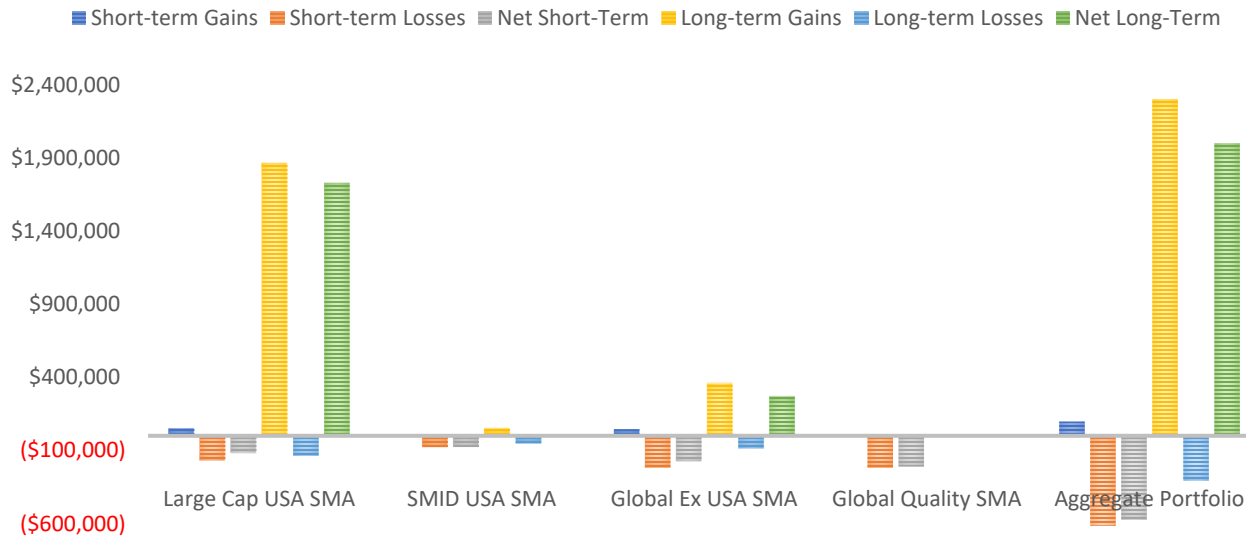
- Date: 4/30/2020
- The portfolio has drifted from the model's allocation weights due to market movements
- Each account has drifted from its respective benchmarks due to a lack of trading
  - > There were very few unrealized losses available and the client had no appetite for any net gains
- Initial Summary

Initial Summary Statistic	Large Cap USA SMA	SMID USA SMA	Global Ex USA SMA	Global Quality SMA	Portfolio
Benchmark	STOXX USA 500	STOXX USA 400	STOXX Global 1800	STOXX Global 1800 Ax Quality	Model Portfolio
Benchmark Weights	50.00%	15.00%	25.00%	10.00%	<b>100%</b>
Portfolio Weights(%)	<b>52.05%</b>	<b>15.10%</b>	<b>22.09%</b>	<b>10.76%</b>	<b>100%</b>
Active Risk	<b>0.87%</b>	<b>1.21%</b>	<b>0.63%</b>	<b>1.38%</b>	<b>0.47%</b>
Net Value	\$6,239,488	\$1,809,723	\$2,647,934	\$1,289,935	\$11,987,080

# Rebalance SMAs With a Tax-Aware Focus

- The recent drawdown in the market has created some loss realization opportunities and the portfolio manager feels this is the right time to tighten up the aggregate portfolio and 4 SMAs

## UNREALIZED GAINS/LOSSES



- Aggregate portfolio's active risk no more than 25 bps
- Each account's active risk at most 50 bps
- Portfolio weights within 1% of the model's weight

Source: Axioma Portfolio Optimizer™

# Rebalance SMAs With a Tax-Aware Focus

- Final Summary:

Final Summary Statistic	Large Cap SMA	Small Cap SMA	Global Ex USA	Global Quality	Aggregate
Benchmark	STOXX USA 500	STOXX USA 400	STOXX Global 1800	STOXX Global 1800 Ax Quality	Model Portfolio
Risk Model	US Equity Risk Model	US Equity Risk Model	Global Equity Risk Model	Global Equity Risk Model	Global Equity Risk Model
Weights(%)	<b>49.42%</b>	<b>15.85%</b>	<b>24.50%</b>	<b>10.22%</b>	<b>100.00%</b>
Net Value	\$5,924,200.47	\$1,900,204.68	\$2,937,230.32	\$1,225,438.10	\$11,987,073.57
Active Risk	<b>0.46%</b>	<b>0.50%</b>	<b>0.50%</b>	<b>0.50%</b>	<b>0.25%</b>
Sell Turnover	12.48%	23.32%	24.09%	21.36%	16.00%
Buy Turnover	7.42%	28.32%	35.02%	16.36%	16.00%

Final Summary Statistic	Aggregate
Realized	
Short-term Gains	\$23,203.97
Short-term Losses	\$518,189.73
<b>Net Short-Term</b>	<b>(\$494,985.76)</b>
Long-term Gains	\$7,182.71
Long-term Losses	\$143,206.29
<b>Net Long-Term</b>	<b>(\$136,023.58)</b>
<b>Total Gains/Losses</b>	<b>(\$631,009.34)</b>

- The aggregate portfolio's active risk is 25 bps
- Each SMA has a max active risk of 50 bps
- The optimization was also able to harvest \$631,009 in losses

# Tax-Managed Workflows: **APIs: Scaling the Process**



## APIs: Scaling the Process

- > All functionality discussed is available via UI and APIs
- > Provides flexibility to produce multiple sensible choices that can be evaluated across multiple dimensions
- > Provides ability to scale to large volume of accounts
  - > Deploy batch processes (possibly in the cloud) to
    - > Discover loss harvesting opportunities
    - > Process more accounts in automated fashion
  - > Deploy services to power custom interactive workflows on behalf of advisors

	Solution 1	Solution 2	Solution 3	Solution 4	Solution 5	Solution 6	Solution 7	Solution 8
Model Tracking Error	0.21%	0.21%	0.21%	0.21%	0.21%	0.21%	0.21%	0.20%
Model TE: Factor Risk	0.07%	0.06%	0.06%	0.07%	0.07%	0.06%	0.07%	0.06%
Model TE: Specific Risk	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%	0.19%
Active Share	0.091515	0.09049	0.09005	0.087258	0.083797	0.081816	0.080872	0.08108
Long Count	349	349	349	349	349	349	349	349
Long Value (%)	99.79%	99.91%	99.93%	99.91%	99.91%	99.92%	99.90%	99.92%
Cash Value (%)	0.21%	0.09%	0.07%	0.09%	0.09%	0.08%	0.10%	0.08%
Tax Liability	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Unrealized Short-term Gains	\$495,657.80	\$437,302.08	\$426,248.22	\$429,698.33	\$401,940.51	\$412,861.75	\$413,211.78	\$413,183.59
Unrealized Short-term Losses	\$1,151,773.62	\$1,154,831.69	\$1,250,981.72	\$1,308,552.54	\$1,324,427.08	\$1,322,958.54	\$1,341,765.58	\$1,349,271.56
Unrealized Long-term Gains	\$28,837,584.01	\$28,801,283.09	\$28,760,209.55	\$28,619,724.30	\$28,413,199.06	\$28,254,002.30	\$28,264,658.60	\$28,266,039.50
Unrealized Long-term Losses	\$1,191,890.52	\$1,344,175.57	\$1,445,898.35	\$1,501,292.27	\$1,501,133.60	\$1,541,509.75	\$1,541,509.44	\$1,541,548.16
Realized Short-term Gains	\$195,211.58	\$253,567.30	\$264,621.16	\$261,171.05	\$288,928.87	\$278,007.63	\$277,657.60	\$277,685.79
Realized Short-term Losses	\$1,173,726.60	\$1,170,668.53	\$1,074,518.50	\$1,016,947.69	\$1,001,073.15	\$1,002,541.68	\$983,734.64	\$976,228.66
Net Realized Short-term G/L	(\$978,515.02)	(\$917,101.23)	(\$809,897.35)	(\$755,776.64)	(\$712,144.28)	(\$724,534.05)	(\$706,077.04)	(\$698,542.87)
Realized Long-term Gains	\$298,024.41	\$334,325.33	\$375,398.87	\$515,884.12	\$722,409.36	\$881,606.11	\$870,949.82	\$869,568.92
Realized Long-term Losses	\$819,509.40	\$667,224.35	\$565,501.56	\$510,107.65	\$510,266.31	\$469,890.16	\$469,890.48	\$469,851.75
Net Realized Long-term G/L	(\$521,484.99)	(\$332,899.02)	(\$190,102.69)	\$5,776.47	\$212,143.04	\$411,715.95	\$401,059.34	\$399,717.17
Net Total Realized G/L	(\$1,500,000.01)	(\$1,250,000.25)	(\$1,000,000.04)	(\$750,000.17)	(\$500,001.23)	(\$312,818.10)	(\$305,017.70)	(\$298,825.71)
Buy Turnover (%)	8.45%	8.21%	7.86%	7.71%	7.95%	7.72%	7.52%	7.66%
Sell Turnover (%)	8.45%	8.21%	7.86%	7.71%	7.95%	7.72%	7.52%	7.66%
Turnover (%)	16.89%	16.42%	15.72%	15.42%	15.90%	15.43%	15.05%	15.32%
Trade Count	146	137	124	120	125	120	117	118

# Summary

## Summary

- **The Axioma Portfolio Optimizer provides tax-sensitive portfolio managers a thorough and exhaustive optimization and analytics tool to manage and report on a wide variety of tax-related workflows**
  - These workflows enhance tax alpha by protecting pre-tax returns through the reduction or elimination of current tax liabilities
  - They also boost future returns by harvesting losses for future use or by refreshing and converting long term lots into short term lots
- **Our multi-portfolio optimization capabilities provide the management of multiple tax-related SMAs concurrently while adhering to the wash sale rule and specific tax workflows**
  - These SMAs can also be aggregated into a portfolio with its own specific strategy
- **The Axioma Optimizer API allows clients to scale and automate their tax-managed business from the thousands to the millions of accounts**

Visit [Axioma.com/tax-managed](https://axioma.com/tax-managed) for Additional Resources

- > **Blog Post:** Frequently Tax Optimize or Drift Away and Lose Tax Alpha
- > **Case Study:** A Tax-Managed Investing Technology and Analytics Solution



# Questions?