

FELRA and UFCW Pension Fund Asset Allocation and Glide Path Review

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Developing an Asset Allocation Glide Path

Step 1: Develop a Base Case

- Using the Fund's current asset allocation and IPS capital market assumptions, calculate the "component return" for fixed income and risk asset portions of the current portfolio structure:

2013 Capital Market Assumptions

<u>Current Portfolio</u>	<u>Benchmark</u>	<u>Mkt Val</u>	<u>Alloc %</u>	<u>Assumed Return</u>
US Lg Cap Equity	S&P 500	94.8	15.6%	8.0%
US Small and Mid Cap Equity	Russell 2500	29.9	4.9%	8.5%
Non-US Developed Mkt Equity	MSCI EAFE	33.7	5.5%	8.0%
Emerging Markets Equity	MSCI EM	25.4	4.2%	9.5%
Real Estate	NCREIF ODCE	79.8	13.1%	8.0%
HFOF	HFRI HFOF Comp	65.1	10.7%	7.0%
GTAA	65% MSCI World/35% WGBI	126.5	20.8%	7.8%
Risk Parity	65% MSCI World/35% WGBI	89.5	14.7%	6.5%
"Risk" Assets		544.7	89.6%	7.7%
Fixed+Cash	Barclays Interm G/C	44.2	7.3%	2.0%
HY	ML 1-3 Yr BB	19.3	3.2%	6.0%
Fixed Income		63.5	10.4%	3.2%
Plan Total		608.2	100.0%	7.2%

Developing an Asset Allocation Glide Path

Step 2: Forecast the plan cash flows and asset balances:

- Use the actuarial projections for contributions, benefit payments and administrative costs
- Calculate the investment returns from market values, current asset allocation and capital market return assumptions
- Establish a minimum level of liquid fixed income required each year to pay benefits

Initial Rule: Hold next 12 months of net plan cash outflows in fixed income

- Calculate the annual change in allocations between fixed income and “risk” assets
- Calculate expiration date of assets

Liquidity Glide Path: Hold Projected Next 12 months of Net Plan Cash Outflows in Fixed Income

	Total Plan Market Value (\$ million)	Asset Allocation Glide Path				Return Forecast			Plan Cash Flows				Results	
		Value of "Risk" Assets	Risk %	Value of Fix Inc	Fixed %	Return for "Risk"	Return for Fix Inc	Total Plan Return %	Total Plan Return \$	Contri- butions	Benefit Payments	Admin Costs	Net Plan Cash Flow	Year End Assets
2013	\$608.2	\$546.2	90%	\$62.1	10%	7.7%	3.2%	7.2%	\$44.0	\$56.1	(\$146.9)	(\$4.1)	(\$50.9)	\$557.4
2014	\$557.4	\$495.3	89%	\$62.1	11%	7.7%	3.2%	7.2%	\$40.1	\$56.1	(\$150.2)	(\$4.2)	(\$58.2)	\$499.2
2015	\$499.2	\$434.1	87%	\$65.1	13%	7.7%	3.2%	7.1%	\$35.5	\$56.2	(\$152.6)	(\$4.4)	(\$65.3)	\$433.9
2016	\$433.9	\$362.4	84%	\$71.5	16%	7.7%	3.2%	7.0%	\$30.2	\$56.5	(\$153.8)	(\$4.5)	(\$71.6)	\$362.3
2017	\$362.3	\$284.3	78%	\$78.0	22%	7.7%	3.2%	6.7%	\$24.4	\$56.9	(\$154.5)	(\$4.6)	(\$77.8)	\$284.5
2018	\$284.5	\$200.8	71%	\$83.7	29%	7.7%	3.2%	6.4%	\$18.1	\$57.6	(\$154.4)	(\$4.8)	(\$83.5)	\$201.0
2019	\$201.0	\$112.0	56%	\$89.0	44%	7.7%	3.2%	5.7%	\$11.5	\$58.4	(\$153.7)	(\$4.9)	(\$88.7)	\$112.3
2020	\$112.3	\$17.2	15%	\$95.1	85%	7.7%	3.2%	3.9%	\$4.4	\$58.4	(\$152.5)	(\$5.1)	(\$94.8)	\$17.5
2021	\$17.5													

Developing an Asset Allocation Glide Path

Step 3: Examine alternative Asset Allocation Glide Path Rules

- What is the impact of keeping 18 months of projected benefit payments in Fixed Income?

Glide Path 2: Hold Projected **18 months** of Net Plan Cash Outflows in Fixed Income

Total Plan Market Value (\$ million)	Asset Allocation Glide Path				Return Forecast				Plan Cash Flows					
	Value of "Risk" Assets	Risk %	Value of Fix Inc	Fixed %	Return for "Risk"	Return for Fix Inc	Total Plan Return %	Total Plan Return \$	Contrib	Benefit Payments	Admin Costs	Net Plan Cash Flow	Year End Assets	
2013	\$608.2	\$530.7	87%	\$77.6	13%	7.7%	3.2%	7.1%	\$43.3	\$56.1	(\$146.9)	(\$4.1)	(\$51.6)	\$556.7
2014	\$556.7	\$468.0	84%	\$88.7	16%	7.7%	3.2%	7.0%	\$38.9	\$56.1	(\$150.2)	(\$4.2)	(\$59.4)	\$497.3
2015	\$497.3	\$393.5	79%	\$103.8	21%	7.7%	3.2%	6.8%	\$33.6	\$56.2	(\$152.6)	(\$4.4)	(\$67.2)	\$430.1
2016	\$430.1	\$320.0	74%	\$110.1	26%	7.7%	3.2%	6.5%	\$28.2	\$56.5	(\$153.8)	(\$4.5)	(\$73.6)	\$356.4
2017	\$356.4	\$235.7	66%	\$120.8	34%	7.7%	3.2%	6.2%	\$22.0	\$56.9	(\$154.5)	(\$4.6)	(\$80.2)	\$276.3
2018	\$276.3	\$146.5	53%	\$129.8	47%	7.7%	3.2%	5.6%	\$15.4	\$57.6	(\$154.4)	(\$4.8)	(\$86.2)	\$190.1
2019	\$190.1	\$51.9	27%	\$138.2	73%	7.7%	3.2%	4.4%	\$8.4	\$58.4	(\$153.7)	(\$4.9)	(\$91.8)	\$98.3
2020	\$98.3			\$96.4	98%	7.7%	3.2%	3.1%	\$3.1	\$58.4	(\$152.5)	(\$5.1)	(\$96.1)	\$2.2

Conclusion:

- The 12 month rule seems adequate, reasonable, and matches the current fixed income allocation
- Using a higher level of cash reserves reduces how long the assets last

Developing an Asset Allocation Glide Path

Step 4: Run scenarios to stress test the Fund's assets to the sensitivity of down markets

Glide Path: Hold Projected 12 months of Net Plan Cash Outflows in Fixed Income

With Modest Market Correction and Immediate Recovery

With modest market correction and immediate recovery														
Total Plan		Asset Allocation Glide Path				Return Forecast				Plan Cash Flows				
Market Value	Value of	Risk	Value of	Fixed	Return for	Return for	Total Plan	Total Plan		Benefit	Admin	Net Plan	Year End	
(\$ million)	"Risk" Assets	%	Fix Inc	%	"Risk"	Fix Inc	Return %	Return \$	Contrib	Payments	Costs	Cash Flow	Assets	
2013	\$608.2	\$546.2	90%	\$62.1	10%	7.7%	3.2%	7.2%	\$44.0	\$56.1	(\$146.9)	(\$4.1)	(\$50.9)	\$557.4
2014	\$557.4	\$495.3	89%	\$62.1	11%	-10.0%	3.2%	-8.5%	-\$47.5	\$56.1	(\$150.2)	(\$4.2)	(\$145.8)	\$411.5
2015	\$411.5	\$346.4	84%	\$65.1	16%	20.0%	3.2%	17.3%	\$71.4	\$56.2	(\$152.6)	(\$4.4)	(\$29.4)	\$382.1
2016	\$382.1	\$306.1	80%	\$76.0	20%	7.7%	3.2%	6.8%	\$26.0	\$56.5	(\$153.8)	(\$4.5)	(\$75.8)	\$306.3
2017	\$306.3	\$223.8	73%	\$82.5	27%	7.7%	3.2%	6.5%	\$19.9	\$56.9	(\$154.5)	(\$4.6)	(\$82.3)	\$224.0
2018	\$224.0	\$135.4	60%	\$88.6	40%	7.7%	3.2%	5.9%	\$13.3	\$57.6	(\$154.4)	(\$4.8)	(\$88.3)	\$135.7
2019	\$135.7	\$41.4	30%	\$94.3	70%	7.7%	3.2%	4.6%	\$6.2	\$58.4	(\$153.7)	(\$4.9)	(\$94.0)	\$41.7

Glide Path: Hold Projected 12 months of Net Plan Cash Outflows in Fixed Income

With Moderate Down Market and 2-Year Recovery

Total Plan	Asset Allocation Glide Path				Return Forecast				Plan Cash Flows					
Market Value	Value of	Risk	Value of	Fixed	Return for	Return for	Total Plan	Total Plan		Benefit	Admin	Net Plan	Year End	
(\$ million)	"Risk" Assets	%	Fix Inc	%	"Risk"	Fix Inc	Return %	Return \$	Contrib	Payments	Costs	Cash Flow	Assets	
2013	\$608.2	\$531.7	87%	\$76.5	13%	7.7%	3.2%	7.1%	\$43.4	\$56.1	(\$146.9)	(\$4.1)	(\$51.5)	\$556.7
2014	\$556.7	\$479.5	86%	\$77.3	14%	-20.0%	3.2%	-16.8%	-\$93.4	\$56.1	(\$150.2)	(\$4.2)	(\$191.7)	\$365.0
2015	\$365.0	\$287.5	79%	\$77.5	21%	25.0%	3.2%	20.4%	\$74.4	\$56.2	(\$152.6)	(\$4.4)	(\$26.4)	\$338.6
2016	\$338.6	\$261.1	77%	\$77.5	23%	20.0%	3.2%	16.2%	\$54.7	\$56.5	(\$153.8)	(\$4.5)	(\$47.1)	\$291.5
2017	\$291.5	\$207.8	71%	\$83.7	29%	7.7%	3.2%	6.4%	\$18.7	\$56.9	(\$154.5)	(\$4.6)	(\$83.5)	\$207.9
2018	\$207.9	\$118.0	57%	\$89.9	43%	7.7%	3.2%	5.8%	\$12.0	\$57.6	(\$154.4)	(\$4.8)	(\$89.6)	\$118.3
2019	\$118.3			\$117.2	99%		3.2%	3.2%	\$3.8	\$58.4	(\$153.7)	(\$4.9)	(\$96.4)	\$21.9

Developing an Asset Allocation Glide Path

Step 5: Refine the Asset Allocation by calculating a detailed “look-through” of actual asset class exposures within GTAA and Risk Parity

GTAA and Risk Parity Allocation "Look Through" as of 3/31/2013

<u>Risk Parity Allocations</u>	<u>Total</u>	<u>US</u>	<u>Non-US</u>	<u>EM</u>	<u>Total</u>	<u>Global</u>	<u>US</u>	<u>Global</u>	<u>HY</u>	<u>EM</u>	<u>Real</u>	<u>Comm-</u>				
	<u>Equity</u>	<u>Equity</u>	<u>Equity</u>	<u>Equity</u>	<u>Bonds</u>	<u>TIPS</u>	<u>Bonds</u>	<u>Bonds</u>	<u>Bonds</u>	<u>Bonds</u>	<u>Estate</u>	<u>odities</u>	<u>Currency</u>	<u>Cash</u>	<u>TOTAL</u>	
AQR	28.0%	13.0%	10.0%	5.0%	236.0%	54.0%	41.0%	99.0%	21.0%	21.0%	0.0%	30.0%	30.0%	0.0%	324.0%	
Putnam	36.7%	19.8%	12.0%	5.0%	97.0%	15.0%	6.0%	41.0%	30.0%	5.0%	3.3%	15.4%	0.0%	0.0%	152.4%	
<u>Risk Parity Allocations Normalized to 100%</u>																
AQR	8.6%	4.0%	3.1%	1.5%	72.8%	16.7%	12.7%	30.6%	6.5%	6.5%	0.0%	9.3%	9.3%	0.0%	100.0%	
Putnam	24.1%	13.0%	7.9%	3.3%	63.6%	9.8%	3.9%	26.9%	19.7%	3.3%	2.2%	10.1%	0.0%	0.0%	100.0%	
<u>GTAA</u>																
Wellington	52.0%	30.0%	16.0%	6.0%	33.0%	5.0%	12.0%	10.0%	0.0%	6.0%	0.0%	10.0%	0.0%	5.0%	100.0%	
Windhaven	47.1%	26.0%	21.1%	0.0%	31.4%	3.0%	25.2%	3.2%	0.0%	0.0%	12.2%	8.0%	0.0%	1.3%	100.0%	
Average Exposure	35.6%	19.7%	13.2%	2.6%	47.2%	7.8%	14.7%	15.6%	5.3%	3.6%	4.3%	9.2%	2.0%	1.7%	100.0%	
	<u>Total</u>	<u>US</u>	<u>Non-US</u>	<u>EM</u>	<u>Total</u>	<u>Global</u>	<u>US</u>	<u>Global</u>	<u>HY</u>	<u>EM</u>	<u>Real</u>	<u>Comm-</u>	<u>Alternative</u>			
	<u>Equity</u>	<u>Equity</u>	<u>Equity</u>	<u>Equity</u>	<u>Bonds</u>	<u>TIPS</u>	<u>Bonds</u>	<u>Bonds</u>	<u>Bonds</u>	<u>Bonds</u>	<u>Estate</u>	<u>odities</u>	<u>Strats</u>	<u>Cash</u>	<u>TOTAL</u>	
PIMCO All Asset	17.8%	1.0%	16.8%	0.0%	67.3%	0.0%	11.3%	29.1%		26.9%	0.0%	2.0%	12.7%	0.2%	100.0%	

Assuming a rising interest rate environment, is AQR an appropriate manager with bonds leveraged 236%?

Developing an Asset Allocation Glide Path

Step 6: Refine the analysis

- Develop the effective asset allocation utilizing a “look-through” on the 35% allocation to GTAA and Risk Parity

Asset Allocation Look Through at of 3/31/2013

Effective Asset Allocation					Current Actual Asset Allocation		
	Actual	Risk Parity +GTAA	Total	Look		Current	
	Plan Assets	Look Through	Plan Allocation	Through		Allocation	
Total Equity	\$183,819,902	\$77,230,705	\$261,050,607	42.9%	Total Equity	\$183,819,902	30.2%
US Equity	\$124,668,368	\$44,416,984.00	\$169,085,352	27.8%	US Equity	\$124,668,368	20.5%
Non-US Equity	\$59,151,534	\$27,164,025	\$86,315,559	14.2%	Non-US Equity	\$59,151,534	9.7%
EM Equity		\$5,649,696	\$5,649,696	0.9%	EM Equity		0.0%
Total Bonds	\$62,068,574	\$105,414,939	\$167,483,513	27.5%	Total Bonds	\$62,068,574	10.2%
Global Tips		\$17,650,722	\$17,650,722	2.9%	Global Tips		0.0%
US Inv Grade	\$42,705,117	\$32,386,146	\$75,091,263	12.3%	US Inv Grade	\$42,705,117	7.0%
Global Bonds		\$34,781,339	\$34,781,339	5.7%	Global Bonds		0.0%
HY Bonds	\$19,363,457	\$11,810,487	\$31,173,944	5.1%	HY Bonds	\$19,363,457	3.2%
EM Bonds		\$8,786,245	\$8,786,245	1.4%	EM Bonds		0.0%
Real Estate	\$79,796,019	\$9,341,281	\$89,137,300	14.7%	Real Estate	\$79,796,019	13.1%
Hedge FOFs	\$64,899,726		\$64,899,726	10.7%	Hedge FOFs	\$64,899,726	10.7%
GTAA					GTAA	\$126,515,512	20.8%
Risk Parity					Risk Parity	\$89,580,189	14.7%
Commodities		\$20,325,792	\$20,325,792	3.3%	Commodities		
Cash	\$1,566,244	\$3,777,299	\$5,343,543	0.9%	Cash	\$1,566,244	0.3%
Totals	\$392,156,150	\$216,090,016	\$608,246,166	100.0%	Totals	\$608,246,166	100.0%
	64.5%	35.5%					

Developing an Asset Allocation Glide Path

Step 7: Examine Alternative Asset Allocations

- Compare results of current allocation (with look-through) to aggressive and conservative options

Asset Allocation Alternatives			
	A	B	C
	<u>Current</u>	<u>Aggressive</u>	<u>Conservative</u>
Total Equity	43.2%	60.0%	20.0%
US Equity Lg	20.0%	40.0%	10.0%
US Equity Small	8.0%	10.0%	5.0%
Non-US Equity	14.5%	5.0%	5.0%
EM Equity	0.9%	5.0%	0.0%
Total Bonds	27.2%	14.0%	54.0%
Global Tps	2.8%	0.0%	0.0%
US Inv Grade	12.3%	4.0%	30.0%
Global Bonds	5.6%	4.0%	15.0%
HY Bonds	5.1%	6.0%	9.0%
EM Bonds	1.3%	0.0%	0.0%
Real Estate	14.8%	15.0%	15.0%
Hedge FOFs	10.7%	10.0%	10.0%
Commodities	3.3%	0.0%	0.0%
Cash	<u>0.9%</u>	<u>1.0%</u>	<u>1.0%</u>
Totals	100.0%	100.0%	100.0%
Return	6.73%	7.35%	5.82%
Risk	10.54%	13.31%	7.33%
Return/Risk Ratio	0.64	0.55	0.79

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ASSET ALLOCATION ASSUMPTIONS

10-Year Annualized Expectations

Asset Class	Return	Risk
Equity		
U.S. Large Cap Stocks	8.00%	19.00
U.S. Mid Cap Stocks	8.50%	22.00
U.S. Smid Cap Stocks	8.50%	24.00
U.S. Small Cap Stocks	8.50%	25.00
International Stocks	8.00%	20.75
Fixed Income		
Cash Equivalents	1.00%	0.50
Bonds- Short Term Government /Credit	2.00%	2.50
Bonds- Intermediate	3.00%	4.00
Bonds- Core	3.25%	5.00
Bonds- High Quality Short Duration High Yield	6.00%	5.75
Bonds- High Quality High Yield	6.50%	10.00
Alternatives		
Hedge Fund of Funds – Multi-Strategy	7.00%	8.00
Global Tactical Asset Allocation	7.75%	12.50
Real Estate – Core	8.00%	9.00

The above chart represents an annualized return forecast for different asset classes using index returns (net of fees). These forecasts are forward-looking assumptions based on reasonable beliefs of the IPS Investment Committee but are not a guarantee of future performance. Actual results may differ from the forecast above.

IPS Investment Committee (01/13).

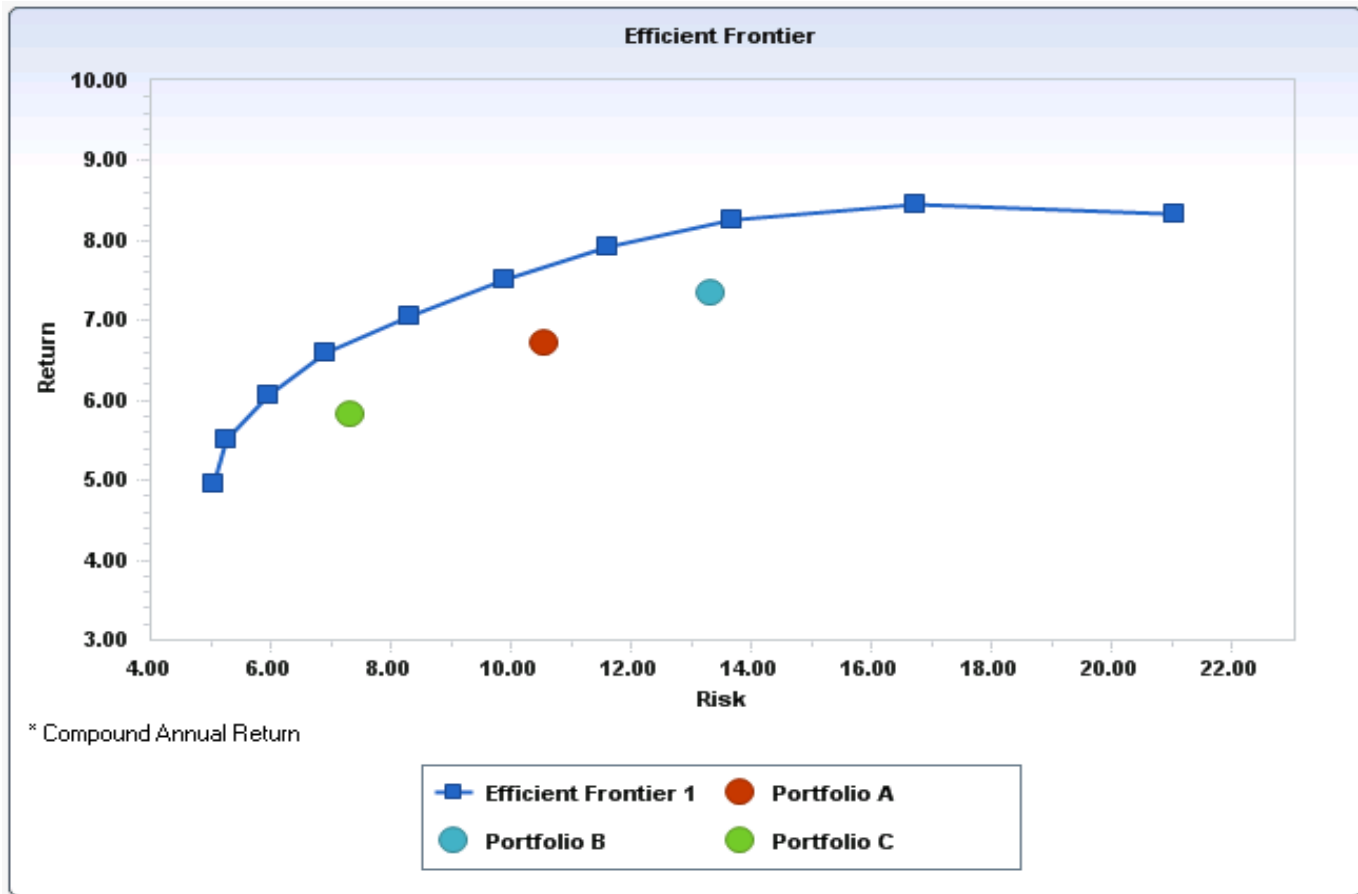


Developing an Asset Allocation Glide Path

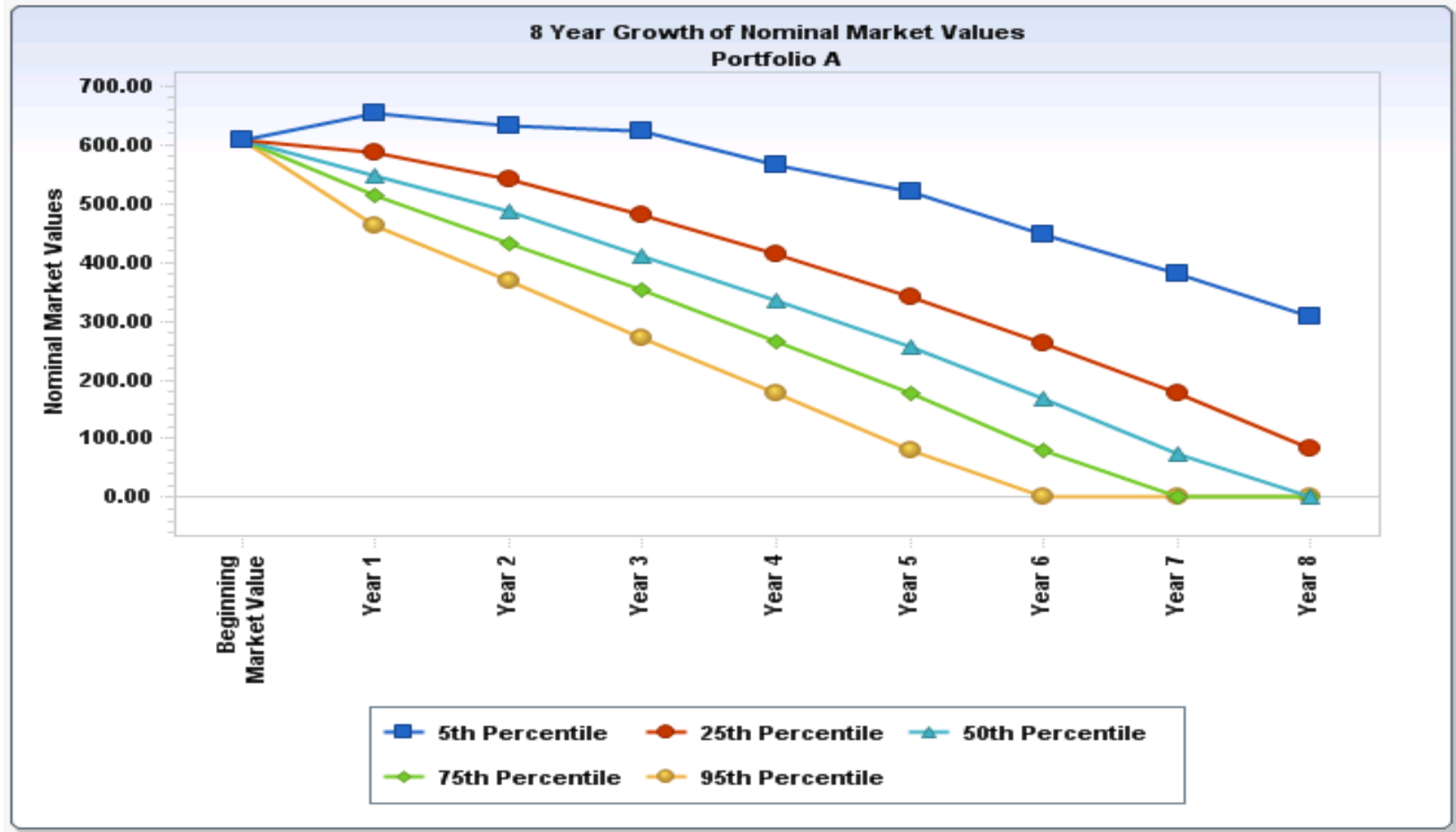
Step 8: Run stochastic A&L models utilizing other asset allocation scenarios

- What happens with higher risk & higher returns?
- What happens with lower risk & lower returns?

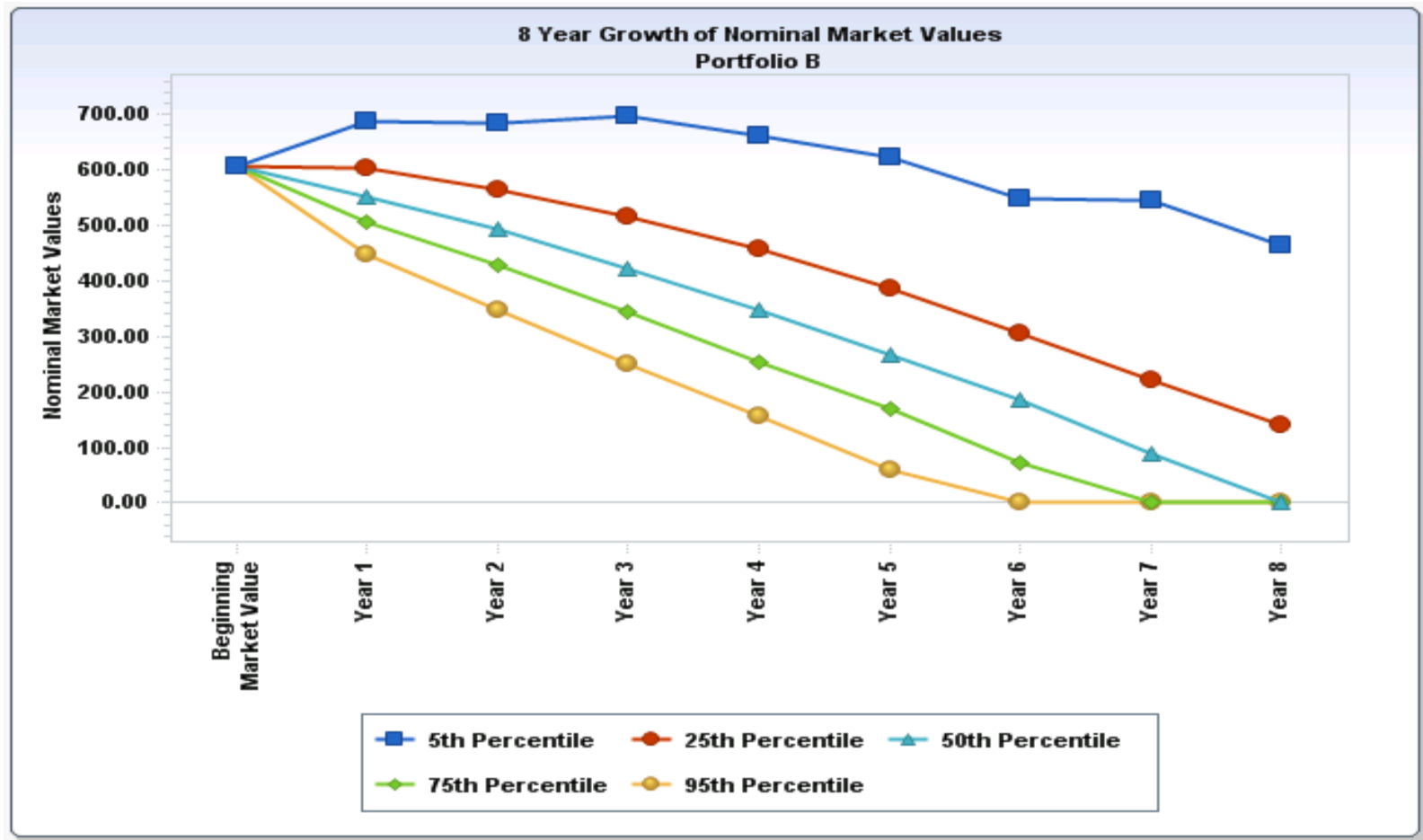
Portfolio A is current plan allocation



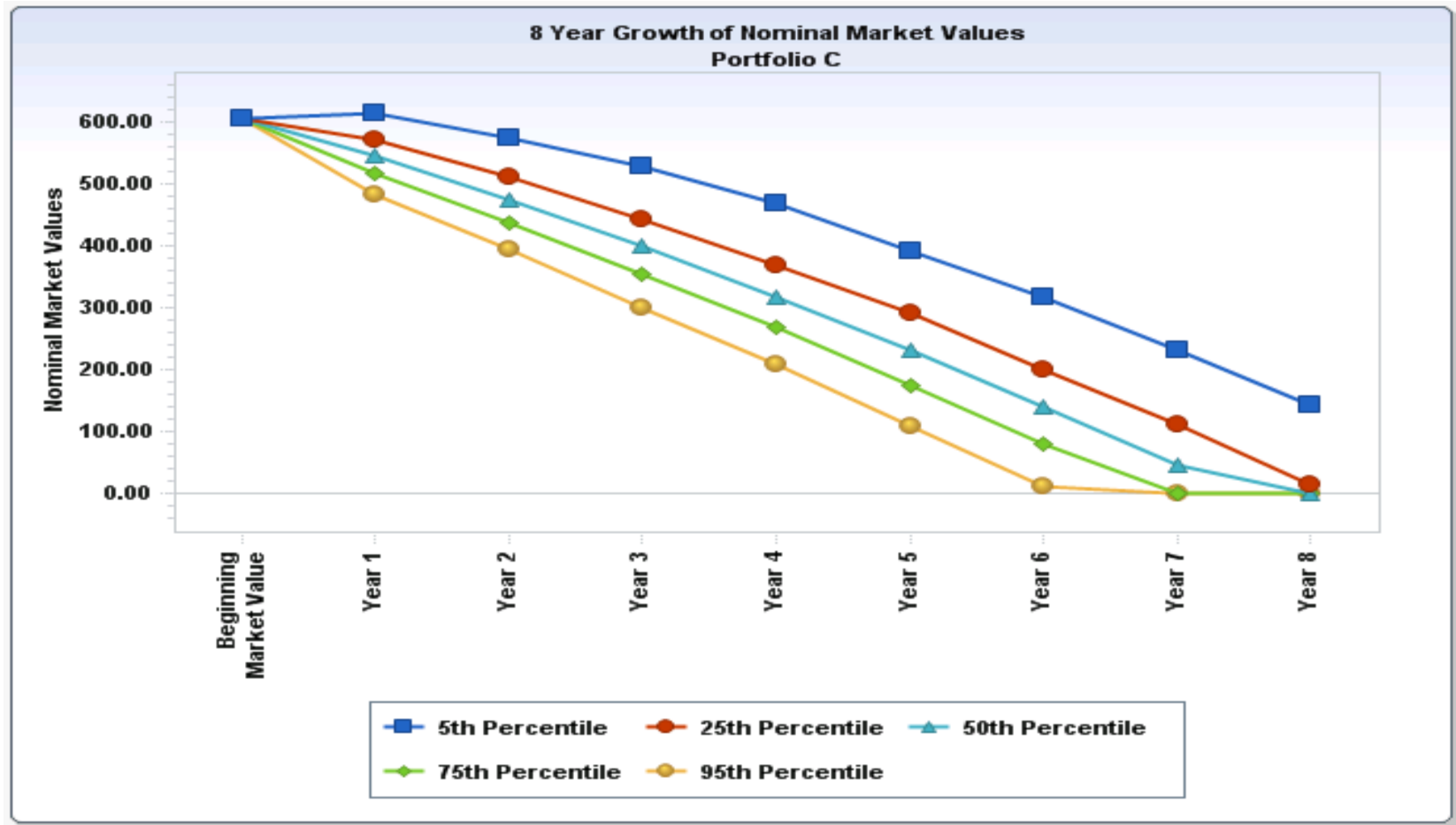
Current Allocation “A”: Range of Market Values Over 8 Years



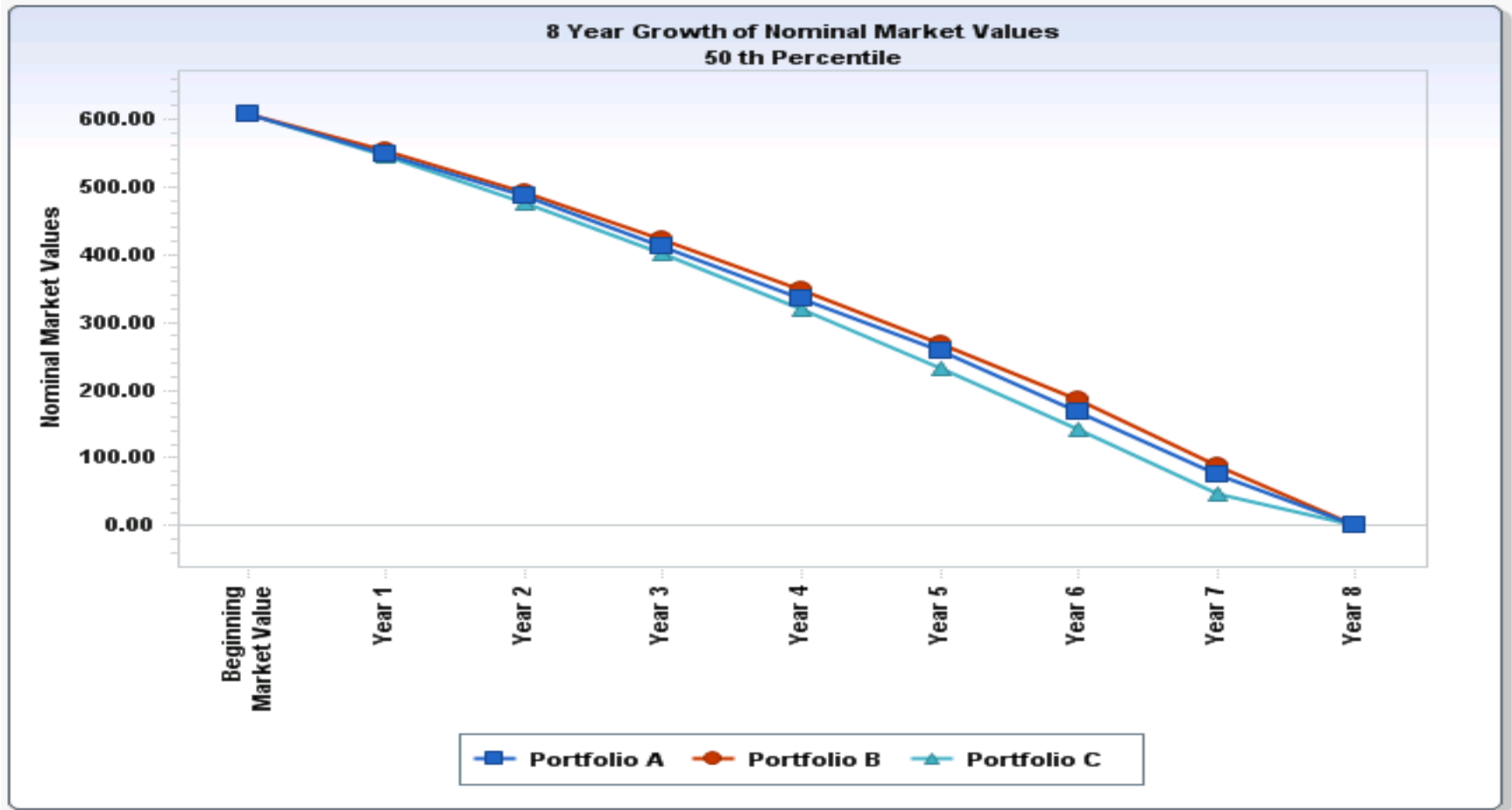
Aggressive Allocation “B”: Range of Market Values Over 8 Years



Conservative Allocation “C”: Range of Market Values over 8 Years



Comparing the Glide Path of the Expected Return (50th Percentile) for Portfolios A, B and C



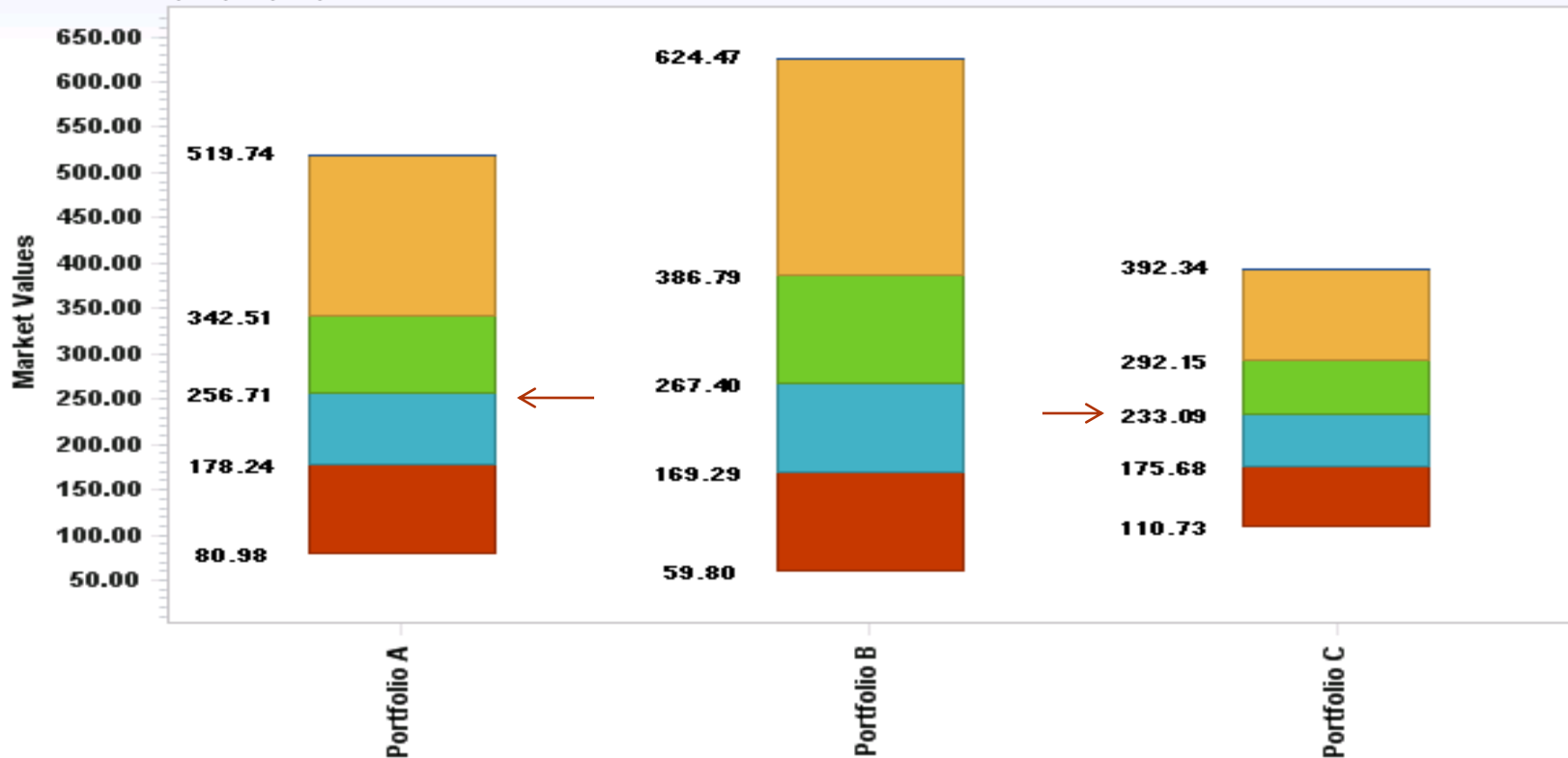
Developing an Asset Allocation Glide Path

- Probable range of Plan market values for each allocation option

The central point of the distributions (50th percentile) is only +/- \$35.5 million from Aggressive (Portfolio B) to Conservative (Portfolio C).

Distribution of Market Values - Nominal
5 Year Time Horizon

Return Distribution Input: Log Normal Median
Percentiles: 5, 25, 50, 75, 95



Developing an Asset Allocation Glide Path

Step 9: Pick the optimal asset allocation

- Develop an optimal implementation plan

Current Actual Asset Allocation				Recommended		Implementation Commentary
	Current Allocation		Look Through	Policy Allocation	Look *	
Total Equity	\$183,819,902	30.2%	42.9%	40.0%	43.0%	
US Equity	\$124,668,368	20.5%	27.8%	30.0%	30.0%	Index - Russell 3000
Non-US Equity	\$59,151,534	9.7%	14.2%	5.0%	7.0%	Index - MSCI EAFE
EM Equity			0.9%	5.0%	6.0%	Index - MSCI EM
Total Bonds	\$62,068,574	10.2%	27.5%	19.5%	29.0%	
Global Tips			2.9%		2.0%	
US Inv Grade	\$42,705,117	7.0%	12.3%	5.0%	7.0%	SBH - Inter G/C Benchmark
Global Bonds			5.7%	10.0%	12.0%	PIMCO Unconstrained
HY Bonds	\$19,363,457	3.2%	5.1%	4.5%	6.0%	Chartwell - ShDur HY
EM Bonds			1.4%		2.0%	
Real Estate	\$79,796,019	13.1%	14.7%	15.0%	16.0%	
Hedge FOFs	\$64,899,726	10.7%	10.7%	10.0%	10.0%	
GTAA	\$126,515,512	20.8%		10.0%		*Wellington & PIMCO All Asset
Risk Parity	\$89,580,189	14.7%		5.0%		* Putnam
Commodities			3.3%	0.0%	1.5%	
Cash	\$1,566,244	0.3%	0.9%	0.5%	0.5%	
Totals	\$608,246,166	100.0%	100.0%	100.0%	100.0%	

Summary of Recommendations

- 1) Adopt the recommended asset allocation
 - Least costly and disruptive to change
 - Aggressive enough to provide reasonable return expectations
 - Conservative enough to weather a modest market downturn
 - Reasonably conventional, reducing “maverick risk”
- 2) Over time, transition active equity managers to index funds
 - Maximizes liquidity and minimizes cost
 - Eliminates risk of under-performing managers
 - Compare cost /benefit of traditional indexation with “fundamental” indexing
 - Immediately index the emerging markets allocation
- 3) Immediately reduce risk parity to 5% or less
 - Terminate AQR
 - Interest rate risk is foreseeable and avoidable
 - An unconstrained bond strategy provides the same tactical global exposure to credit, but can be short duration, potentially preserving principal or even providing gains from a benign or rising interest rate environment
- 4) GTAA – Terminate Windhaven and transfer assets to PIMCO All Asset
- 5) Adopt a glide path using a “12 months of projected net cash flows” rule for the fixed income allocation
- 6) Begin systematic liquidation program for all longer-dated assets (real estate and HFOFs), no later than 2017

Forecast Asset Allocation Glide Path

Rule: Hold next 12 months of net plan cash outflows in fixed income

	2013		2014		2015		2016		2017		2018		2019		2020	
	Recommended		Allocation		Allocation		Allocation		Allocation		Allocation		Allocation		Allocation	
	Policy Allocation															
Total Equity	40.0%	\$264	40.0%	\$240	40.0%	\$213	40.0%	\$184	37.0%	\$140	33.0%	\$97	26.0%	\$52	0.0%	\$0
US Equity	30.0%	\$198	30.0%	\$180	30.0%	\$160	30.0%	\$138	28.0%	\$106	26.0%	\$76	22.0%	\$44	0.0%	\$0
Non-US Equity	5.0%	\$33	5.0%	\$30	5.0%	\$27	5.0%	\$23	5.0%	\$19	5.0%	\$15	4.0%	\$8	0.0%	\$0
EM Equity	5.0%	\$33	5.0%	\$30	5.0%	\$27	5.0%	\$23	4.0%	\$15	2.0%	\$6	0.0%	\$0	0.0%	\$0
Total Bonds	19.5%	\$129	19.5%	\$117	19.5%	\$104	19.5%	\$90	23.5%	\$89	30.0%	\$88	47.0%	\$94	90.0%	\$95
US Interm G/C	5.0%	\$33	5.0%	\$30	5.0%	\$27	5.0%	\$23	9.0%	\$34	16.0%	\$47	33.0%	\$66	90.0%	\$95
Unconstrained Bond	10.0%	\$66	10.0%	\$60	10.0%	\$53	10.0%	\$46	10.0%	\$38	10.0%	\$29	10.0%	\$20	0.0%	\$0
Sh Dur HY Bonds	4.5%	\$30	4.5%	\$27	4.5%	\$24	4.5%	\$21	4.5%	\$17	4.0%	\$12	4.0%	\$8	0.0%	\$0
Real Estate	15.0%	\$99	15.0%	\$90	15.0%	\$80	15.0%	\$69	12.5%	\$47	10.0%	\$29	5.0%	\$10	0.0%	\$0
Hedge FOFs	10.0%	\$66	10.0%	\$60	10.0%	\$53	10.0%	\$46	8.0%	\$30	6.0%	\$18	4.0%	\$8	0.0%	\$0
GTAA	10.0%	\$66	10.0%	\$60	10.0%	\$53	10.0%	\$46	12.0%	\$45	15.0%	\$44	10.0%	\$20	0.0%	\$0
Risk Parity	5.0%	\$33	5.0%	\$30	5.0%	\$27	5.0%	\$23	5.0%	\$19	3.0%	\$9	0.0%	\$0	0.0%	\$0
Cash	0.5%	\$3	0.5%	\$3	0.5%	\$3	0.5%	\$2	2.0%	\$8	3.0%	\$9	5.0%	\$10	10.0%	\$11
Year End Assets	100.0%	\$660	100.0%	\$600	100.0%	\$533	100.0%	\$459	100.0%	\$379	100.0%	\$293	97.0%	\$201	100.0%	\$105
Forecasted Return	7.2%		7.2%		7.2%		7.2%		6.9%		6.5%		5.2%		2.8%	
Est Cash Flow (\$ mill)		(52.00)		(60.00)		(67.00)		(74.00)		(80.00)		(86.00)		(92.00)		(96.00)

Supplemental Information

- Risk parity has significant credit and rate exposures and uses leverage, but does not hedge against increasing rates or credit events.
- Unconstrained bond strategies may hedge both credit events and rate risk

Comparison of the Characteristics of Non-Traditional Strategies

<u>Asset Classes Used</u>	<u>Hedge Fund of Funds</u>	<u>Risk Parity</u>	<u>Global Tactical AA</u>	<u>Unconstrained Bond</u>
Credit	Yes	Yes	Yes	Yes
Interest Rates	Yes	Yes		Yes
Equity	Yes	Yes	Yes	No
Commodities	Yes	Yes	Yes	No
Currency	Yes	Yes	Yes	Yes - Hedging only
Use of Leverage	Yes 1-3x 1.5 Aver	Yes 0.3-2x 0.5 Aver	No	No
Use of Hedging	Yes - Low Net Betas	NO - Very High Betas	NO - Long only	Yes - Credit and Rates
Strategy Emphasis	Balanced Risk	Balanced Risk	Balanced Risk	Tactical Credit and Rates
Highest Allocations	Credit Strategies	Credit and Rates	Equity	Credit
<u>Potential for Protection from Market Risk</u>				
Down Equity Markets	Good - 0.3 Beta	Modest - 0.6 Beta	Modest - 0.6 Beta	Good - 0.0 Beta
Rising Rates	Good - Low or Neg Beta	Poor - High Beta	Good - 0.3 Beta	Good - Tactical Beta
Credit Events	Good - Low or Neg Beta	Poor - High Beta	Good - 0.3 Beta	Good - Tactical Beta

Supplemental Information

Manager Recommendations:

U.S. Equity

INTECH

Foundry

NWQ

Wedge

Westwood

Near Term

Retain

Retain – Renegotiate fees

Terminate

Retain

Retain

Long Term

Index - Russell 3000

Index – Russell 3000

Index – Russell 3000

Index – Russell 3000

Index – Russell 3000

International

Gryphon

Vanguard ETF

Retain

Retain

Index – MSCI EAFE*

Index – MSCI EAFE*

Fixed Income

IR&M

SBH

Lazard

Terminate (in kind transfer to SBH)

Retain – Change benchmark to Intermediate G/C

Terminate (in kind transfer to Chartwell)

* Compare cost of index fund with ETFs

Supplemental Information

Manager Recommendations:

Real Estate

JPMorgan

Near Term

Retain

Long Term

Begin liquidation by 2017

Hedge Fund of Funds

EnTrust

Retain

Begin liquidation by 2017

Mesirow

Retain

Begin liquidation by 2017

Risk Parity

AQR

Terminate - \$ to PIMCO Unconstrained Bond CIT

Putnam

Retain

Reduce allocation

GTAA

Windhaven

Terminate - \$ to PIMCO All Asset

Wellington

Retain

**Use GTAA for diversification
as RE, HFOF and equity allocations
are reduced**

Disclosure Statements:

The data presented are projections and illustrations only. There can be no assurance that the Fund's investment objectives will be achieved, or that the performance illustrated will be achieved in the future.

IPS has undertaken reasonable efforts to obtain information from reliable sources, but makes no express warranty as to the completeness or accuracy of the information received from outside sources; therefore IPS can not accept responsibility for any errors based on that information appearing in any of the materials used.

Return forecasts for various asset classes are forward-looking assumptions based on reasonable expectations of the IPS Investment Committee, but are not a guarantee of future performance. Actual results may and will differ from the forecasts.

This is only a brief summary of potential investment risks associated with investing funds in the various strategies presented. Investors should carefully review the risk disclosures contained in each investment's offering memorandum, prospectus, or other disclosure documents.

Past performance is not indicative of future returns.