

TSG Performance AORT April 2025

*Strategic and Tactical
Asset Allocation*

Bringing It Together



"Insights and Innovation"

Stephen Campisi, CFA

The Ingredients of Asset Allocation

Capital Markets Assumptions:

- *Asset Groups*
- *Return*
- *Risk*
- *Correlation*

Asset Groups

	Bonds	Stocks	Alternatives
Least Risk	Cash	Large US	US Core RE
	Int TSY	Mid US	US Val RE
	Treasury	SC	Euro Core RE
	TIPS	ACWI	Asia Core RE
	AGG	Foreign Equity	REIT
	Short GC	EM Equity	CML
	Long GC	Eur LC	Gloval Infra
	Corp	UK LC	Global Transp
	Long Corp	China Eq	Global Timber
	HY	AC Asia xJP	Comm
	Lev Loans	JP Eq	Gold
	WG Bond Hedged	HK Eq	PE
	WGB		VC
	WGB xUS Hedged		HF-Div
	WGB xUS		HF-Event
Most Risk (!)	EM Sov Debt		HF-Long Bias
	EM Local Curr		HF-Rel Val
	EM Corp		HF-Macro
			Direct Debt

Diversification Within Equity?



	Large US	Mid US	SC	Eur LC	JP Eq	HK Eq	UK LC	Foreign Equity	China Eq	EM Equity	AC Asia xJP	ACWI
Large US	1.00	0.96	0.90	0.85	0.73	0.60	0.83	0.88	0.36	0.74	0.71	0.96
Mid US	0.96	1.00	0.95	0.84	0.72	0.61	0.81	0.87	0.35	0.76	0.72	0.95
SC	0.90	0.95	1.00	0.76	0.67	0.53	0.73	0.79	0.32	0.68	0.65	0.87
Eur LC	0.85	0.84	0.76	1.00	0.76	0.69	0.91	0.97	0.38	0.82	0.79	0.93
JP Eq	0.73	0.72	0.67	0.76	1.00	0.62	0.75	0.85	0.35	0.70	0.69	0.81
HK Eq	0.60	0.61	0.53	0.69	0.62	1.00	0.74	0.75	0.59	0.85	0.89	0.72
UK LC	0.83	0.81	0.73	0.91	0.75	0.74	1.00	0.95	0.40	0.81	0.77	0.91
Foreign Equity	0.88	0.87	0.79	0.97	0.85	0.75	0.95	1.00	0.41	0.86	0.83	0.97
China Eq	0.36	0.35	0.32	0.38	0.35	0.59	0.40	0.41	1.00	0.56	0.61	0.42
EM Equity	0.74	0.76	0.68	0.82	0.70	0.85	0.81	0.86	0.56	1.00	0.98	0.87
AC Asia xJP	0.71	0.72	0.65	0.79	0.69	0.89	0.77	0.83	0.61	0.98	1.00	0.83
ACWI	0.96	0.95	0.87	0.93	0.81	0.72	0.91	0.97	0.42	0.87	0.83	1.00

Do Bonds Diversify Equity Risk?

	Int TSY	Treasury	TIPS	AGG	Short GC	Long GC	Corp	Long Corp	HY	Lev Loans	WG Bond Hedged	WGB	WGB xUS Hedged	WGB xUS	EM Sov Debt	EM Local Curr	EM Corp
Large US	-0.11	-0.10	0.29	0.21	0.09	0.21	0.46	0.44	0.74	0.58	0.03	0.26	0.12	0.34	0.60	0.59	0.56
Mid US	-0.16	-0.12	0.28	0.19	0.07	0.19	0.47	0.44	0.78	0.63	-0.01	0.22	0.08	0.31	0.60	0.59	0.57
SC	-0.19	-0.19	0.18	0.11	0.01	0.10	0.36	0.34	0.71	0.56	-0.07	0.15	0.02	0.23	0.50	0.52	0.47
Eur LC	-0.06	-0.10	0.27	0.25	0.19	0.22	0.48	0.45	0.72	0.53	0.02	0.39	0.08	0.47	0.67	0.72	0.62
JP Eq	-0.05	-0.03	0.25	0.26	0.18	0.25	0.50	0.47	0.66	0.49	0.04	0.30	0.09	0.37	0.58	0.62	0.56
HK Eq	-0.06	-0.06	0.23	0.26	0.20	0.23	0.49	0.45	0.60	0.50	-0.03	0.29	-0.02	0.35	0.60	0.67	0.65
UK LC	-0.17	-0.18	0.23	0.17	0.09	0.15	0.44	0.41	0.72	0.61	-0.09	0.29	-0.02	0.39	0.61	0.66	0.60
Foreign Equity	-0.08	-0.09	0.30	0.26	0.19	0.24	0.52	0.49	0.77	0.59	0.01	0.39	0.07	0.47	0.68	0.74	0.65
China Eq	-0.05	-0.03	0.11	0.16	0.11	0.14	0.29	0.26	0.35	0.29	0.01	0.15	0.02	0.18	0.34	0.35	0.40
EM Equity	-0.07	-0.06	0.32	0.27	0.21	0.25	0.52	0.48	0.72	0.57	0.01	0.38	0.05	0.46	0.69	0.80	0.70
AC Asia xJP	-0.04	-0.02	0.31	0.30	0.23	0.28	0.54	0.50	0.70	0.54	0.04	0.37	0.06	0.44	0.67	0.75	0.69
ACWI	-0.10	-0.10	0.31	0.25	0.15	0.23	0.52	0.49	0.79	0.62	0.02	0.34	0.09	0.43	0.67	0.71	0.64



 Best

 Diversification

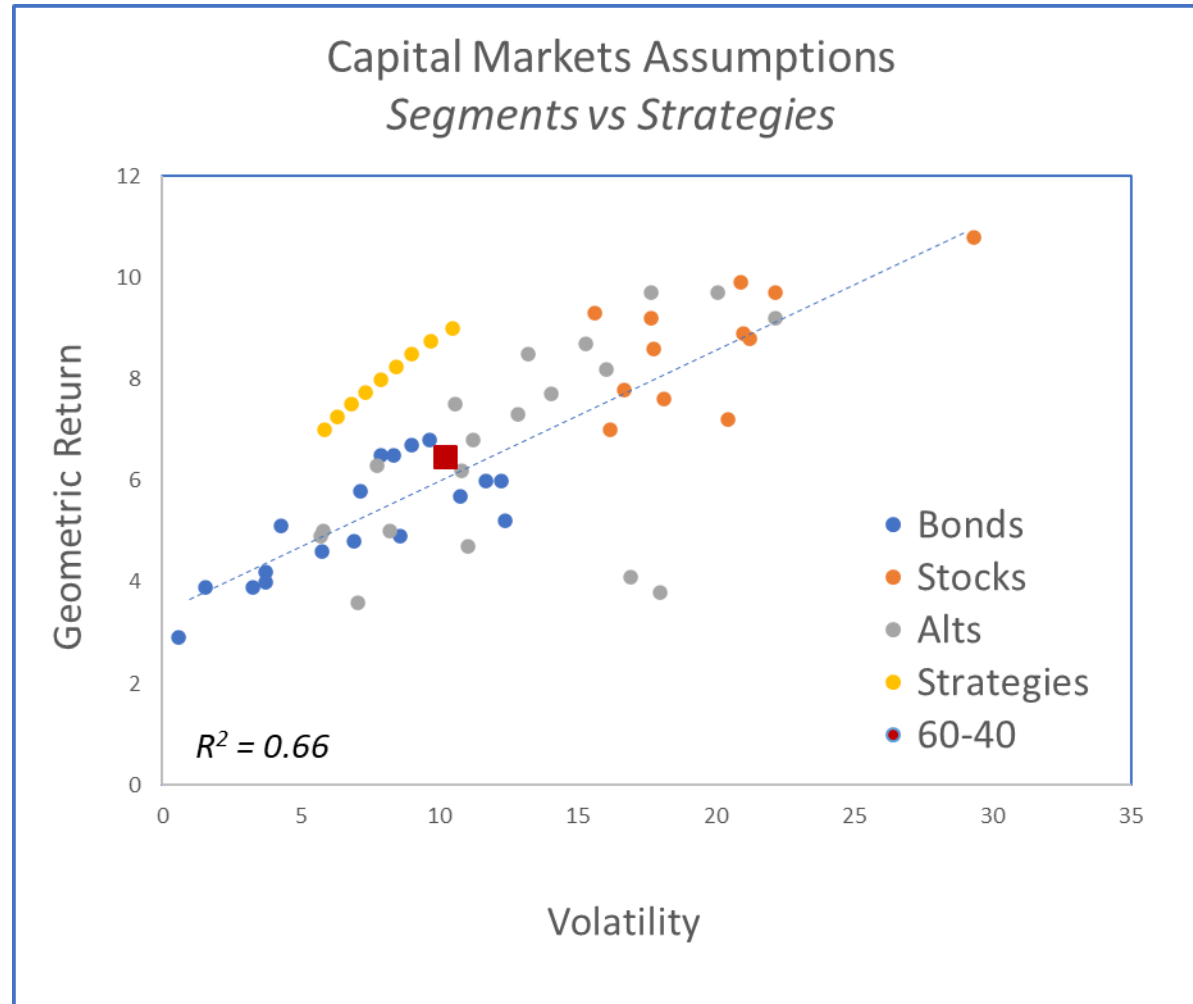
Decreasing

 Diversification
 



 Flavors of Equity
 

Capital Markets Assumptions



The Process of Asset Allocation

Getting to Diversification:

- *Start with an unbiased view*
- *Avoid concentrations*
- *Understand the cost of your constraints*
- *Use your judgement*

Unconstrained 7.5% Strategy

Unconstrained

Bonds	45%
Equity	10%
Alternatives	45%
Return	7.50
Volatility	5.10

Unconstrained

Treasury	9.3%
AGG	35.6%
JP Eq	6.3%
China Eq	3.9%
US Val RE	5.8%
Global Transp	17.4%
Timber	3.7%
VC	0.6%
HF-Macro	1.0%
Direct Debt	16.4%

Guidelines:

- Minimize volatility at target return
- Long only
- No leverage
- No limits on broad asset allocation

Evaluation:

- Is this investable?
- Any objections?

Constraint #1:

Limit Alternatives Exposure

	Alts<33% Growth
Bonds	62%
Equity	26%
Alternatives	13%
Return	7.50
Volatility	5.86

Treasury	10.2%
AGG	28.3%
Lev Loans	23.3%
JP Eq	18.7%
China Eq	6.9%
Global Transp	12.6%

Guidelines:

- Alts limited to 1/3 of Total “Growth”
(Growth = Equity + Alts)
- No asset allocation constraints

Next step:

- Focus on Equity
- Any concentrations?

Constraint #2:

Limit Foreign Equity Exposure

Bonds	61%
Equity	26%
Alternatives	13%
Return	7.50
Volatility	6.44

Guidelines:

- Limit Foreign to 50% of Equity
- No asset allocation constraints

Fgn<50% Equity

Treasury	19.7%
AGG	12.0%
Lev Loans	28.9%
Large US	2.6%
Mid US	9.6%
SC	1.0%
JP Eq	6.1%
China Eq	7.1%
US Val RE	0.3%
Global Transp	12.7%

Next step:

- Focus on Bonds
- Is it diversified?
- Balance of risk?

Constraint #3:

Limit High Yield Exposure

Bonds	55%
Equity	30%
Alternatives	15%
Return	7.50
Volatility	6.52

HY<20% Bonds	
Treasury	12.3%
AGG	31.4%
Lev Loans	10.9%
Mid US	15.2%
JP Eq	7.5%
China Eq	7.7%
US Val RE	2.5%
Global Transp	12.5%

Guidelines:

- Limit High Yield to 20% of Bonds
- No asset allocation constraints

Next step:

- Focus on US Equity
- Is it acceptable?

Constraint #4:

Diversify US Equity Exposure

LC>50% US	
Bonds	53%
Equity	31%
Alternatives	15%
Return	7.50
Volatility	6.54

LC>50% US	
Treasury	12.4%
AGG	30.2%
Lev Loans	10.7%
Large US	7.8%
Mid US	7.8%
JP Eq	7.8%
China Eq	7.9%
US Val RE	3.0%
Global Transp	12.4%

Guidelines:

- US LC >50% of US Equity
- No asset allocation constraints

Next step:

- Focus on Alternatives
- Is it diversified?

Constraint #5:

Diversify Alternatives Exposure

Bonds	56%
Equity	29%
Alternatives	14%
Return	7.50
Volatility	6.60

Alt
Concentration
<50%

Treasury	13.5%
AGG	31.4%
Lev Loans	11.2%
Large US	7.3%
Mid US	6.9%
SC	0.4%
JP Eq	7.0%
China Eq	7.7%
US Val RE	7.2%
Global Transp	7.2%

Guidelines:

- No single category >50% of Alternatives
- No asset allocation constraints

Evaluation:

- Focus on Foreign Equity
- Is it diversified?

Constraint #6:

Diversify Foreign Equity Exposure

Asia Concentration	
Bonds	56%
Equity	29%
Alternatives	14%
Return	7.50
Volatility	6.83

Asia <50% Fgn	
Treasury	15.8%
AGG	29.1%
Lev Loans	11.2%
Large US	7.3%
Mid US	6.1%
SC	1.3%
Foreign Equity	7.3%
China Eq	7.3%
US Val RE	7.2%
Global Transp	7.2%

Guidelines:

- Asia limited to <50% of Foreign Equity
- No asset allocation constraints

Evaluation:

- Are we diversified?

Next step:

- Review our incremental results

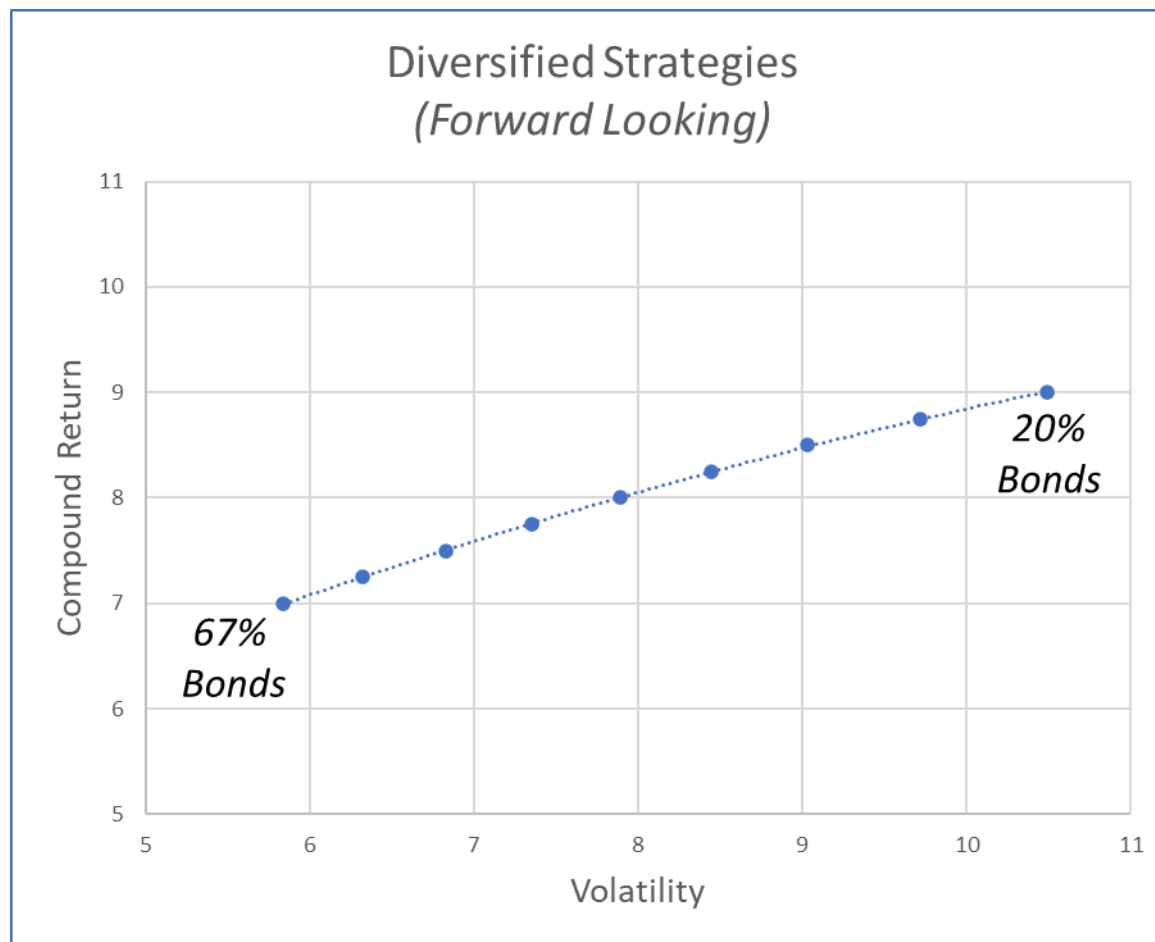
Incremental Steps to Reasonable Constraints

	Unconstrained	Alts<33% Growth	Fgn<50% Equity	HY<20% Bonds	LC>50% US	Alt Concentration <50%	Asia Concentration <50%
Bonds	45%	62%	61%	55%	53%	56%	56%
Equity	10%	26%	26%	30%	31%	29%	29%
Alternatives	45%	13%	13%	15%	15%	14%	14%
Return	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Volatility	5.10	5.86	6.44	6.52	6.54	6.60	6.83

This suggests a 50-50 strategy for a 7.5% target return

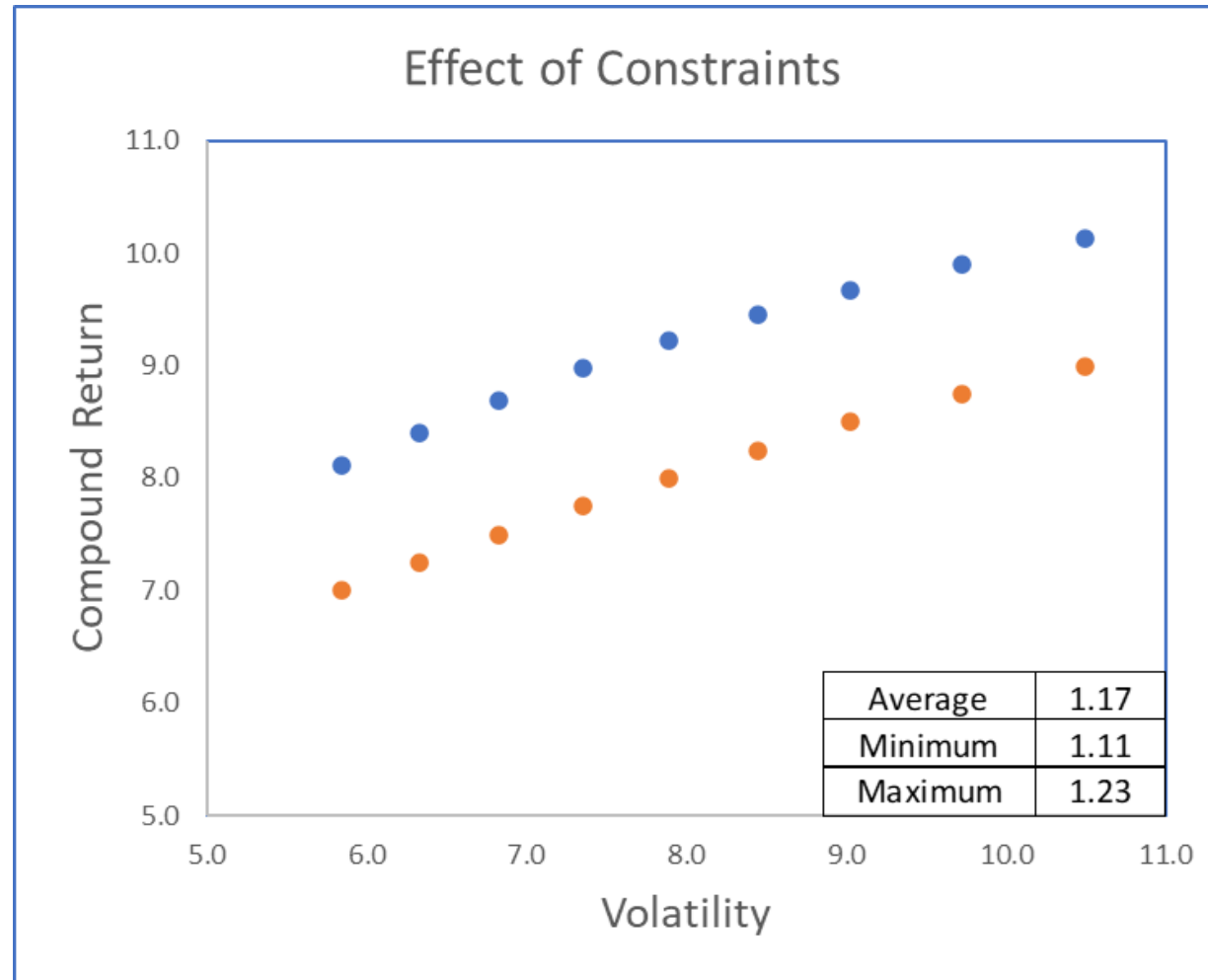
Treasury	9.3%	10.2%	19.7%	12.3%	12.4%	13.5%	15.8%
AGG	35.6%	28.3%	12.0%	31.4%	30.2%	31.4%	29.1%
Lev Loans		23.3%	28.9%	10.9%	10.7%	11.2%	11.2%
Large US			2.6%		7.8%	7.3%	7.3%
Mid US			9.6%	15.2%	7.8%	6.9%	6.1%
SC			1.0%			0.4%	1.3%
JP Eq	6.3%	18.7%	6.1%	7.5%	7.8%	7.0%	
Foreign Equity							7.3%
China Eq	3.9%	6.9%	7.1%	7.7%	7.9%	7.7%	7.3%
US Val RE	5.8%		0.3%	2.5%	3.0%	7.2%	7.2%
Global Transp	17.4%	12.6%	12.7%	12.5%	12.4%	7.2%	7.2%
Timber	3.7%						
VC	0.6%						
HF-Macro	1.0%						
Direct Debt	16.4%						

Efficient Diversified Strategies (Using our Constraints)

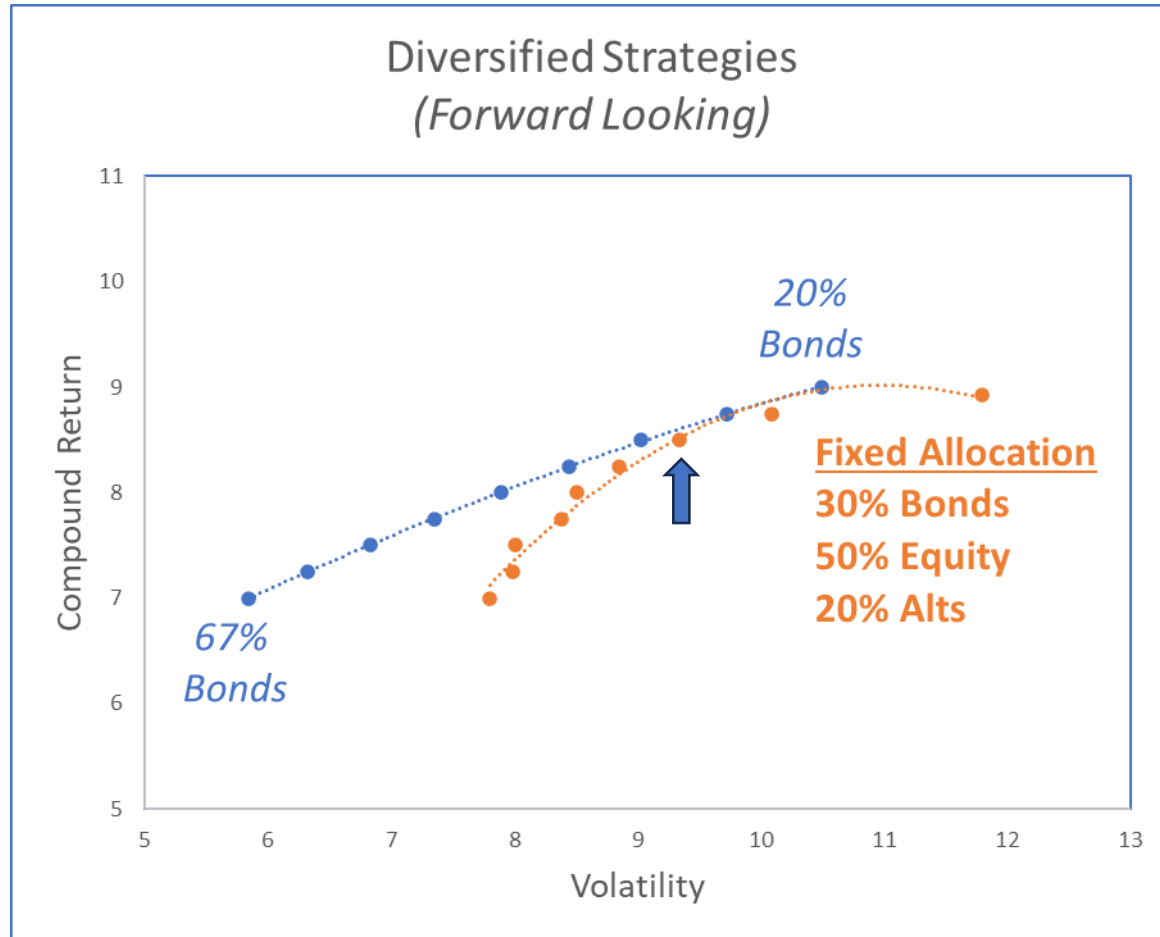


*Asset allocation
(major groups)
driven by
efficiency*

Evaluating the “Cost” of Constraints



Benefit of Mandating Major Asset Class Weights?



- Should you constrain the major asset classes?
- Is there a macro allocation for each return target?
- **30% bond** allocation suggests an **8.5% return** target

Efficient Diversified Allocations

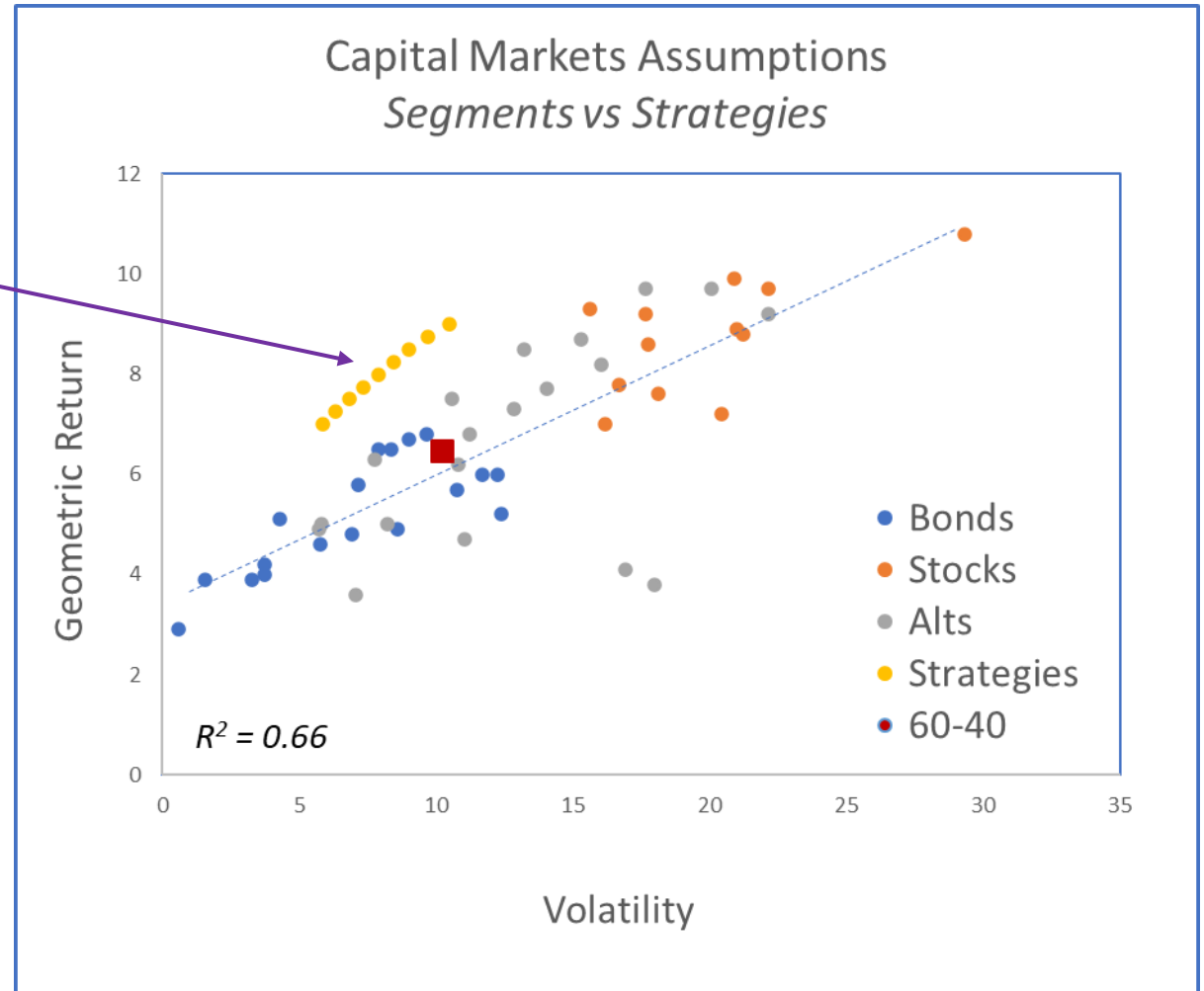
Return	7.00	7.25	7.50	7.75	8.00	8.25	8.50	8.75	9.00
Volatility	5.84	6.32	6.83	7.35	7.89	8.45	9.03	9.72	10.49
Bonds	67%	61%	56%	51%	45%	40%	33%	26%	20%
Equity	22%	26%	29%	33%	37%	40%	45%	49%	54%
Alternatives	11%	13%	14%	16%	18%	20%	22%	24%	26%

Treasury	8.8%	12.2%	15.8%	19.5%	23.2%	27.1%	26.7%	23.4%	19.9%
AGG	44.5%	36.9%	29.1%	21.1%	13.0%	4.6%			
Lev Loans	13.3%	12.3%	11.2%	10.1%	9.1%	7.9%	6.7%	2.8%	
Large US	5.6%	6.5%	7.3%	8.2%	9.2%	10.1%	11.2%	12.4%	13.4%
Mid US	2.9%	4.5%	6.1%	7.8%	9.2%	10.1%	11.2%	12.4%	13.4%
SC	2.6%	1.9%	1.3%	0.5%					
Eur LC							2.5%	8.6%	
UK LC	1.0%	0.3%							
Foreign Equity	4.6%	6.2%	7.3%	8.2%	9.2%	10.1%	11.2%	9.9%	4.8%
China Eq	5.6%	6.5%	7.3%	8.2%	9.2%	10.1%	11.2%	12.4%	13.4%
US Val RE	5.5%	6.4%	7.2%	8.1%	9.0%	9.9%	11.0%	12.2%	13.2%
Global Transp	5.5%	6.4%	7.2%	8.1%	9.0%	9.9%	11.0%	12.2%	13.2%
Sharpe Ratio	0.70	0.69	0.67	0.66	0.65	0.63	0.62	0.60	0.58

We did not mandate macro asset allocations

There and Back Again

- *We applied our set of constraints to each target return (7% - 9%) in 25 bps increments.*
- *This creates an Efficient Frontier customized to our market view and diversification insights.*



Tactical Asset Allocation

**Not
Stock
Picking?**

- *Core of Active Management*
 - *Short Term Market Calls*
 - *Forward-Looking Allocation Effect*
- *Is this linked to Strategic Allocation?*
 - *Who makes these decisions?*
 - ***Is there a short-term return forecast?***
 - ***What about active risk?***



What is YOUR Firm's Approach to Tactical Positioning?

Typical approach:

- Someone establishes a **viewpoint** on the markets
- Segments are identified for **overweighting and underweighting**
- Tactical shifts are typically defined in **absolute terms**

Key questions:

- Are there **return estimates** for each tactical segments?
- Do you calculate the **expected tracking error** from these changes?

Attribution Must Focus on the Forecast

Typical Attribution Approach:

- Benchmark driven
 - *Allocation effect driven by sector returns vs benchmark average*
 - *Residual effect driven by investment selection*

Forecast Approach:

- Portfolio driven
 - *Forecasted sector returns vs strategic sector returns*
 - *Static vs active exposures applied to forecast returns*
(Opportunity cost of “Do Nothing” portfolio)

Linking Strategic and Tactical Asset Allocation



Warning:
Math is about to happen...

Source of Strategic Volatility (3-Asset Example*)

	Stocks	Bonds	Real Estate
Stocks			
Bonds			
Real Estate			

Covariance Matrix

x

	Stocks	Bonds	Real Estate
Stocks			
Bonds			
Real Estate			

Weighting Matrix

=

	Stocks	Bonds	Real Estate
Stocks			
Bonds			
Real Estate			

Variance

* From Harry M. and the Three Crayons: "Revealing the Mysteries of Diversification"

Source of Active Volatility (Tracking Error)

	Stocks	Bonds	Real Estate
Stocks			
Bonds			
Real Estate			

Covariance Matrix

x

	Stocks	Bonds	Real Estate
Stocks			
Bonds			
Real Estate			

Active Weights
(Matrix)

=

	Stocks	Bonds	Real Estate
Stocks			
Bonds			
Real Estate			

Active Risk
(Tracking Error)

Tactical Scenario

	Strategic Allocation	Tactical Allocation	Active Allocation
Cash	0.0%	5.0%	5.0%
Bonds	30.0%	45.0%	15.0%
Equity	50.0%	35.0%	-15.0%
Alternatives	20.0%	15.0%	-5.0%

Return 7.72
Volatility 11.47

	Strategic Allocation	Tactical Allocation	Strategic Expected Return	Short-Term Expected Return
Cash	0%	5%	2.90	2.90
Treasury	5%	10%	5.92	7.25
TIPS	5%	10%	4.76	5.25
AGG	10%	15%	5.19	5.75
HY	5%	3%	6.83	-2.75
WGB xUS	5%	7%	5.25	6.25
Large US	20%	16%	8.19	-5.75
Mid US	10%	8%	9.08	-4.25
SC	5%	3%	9.07	-2.50
Foreign Equity	10%	5%	10.58	-6.25
EM Equity	5%	3%	10.77	-10.75
REIT	10%	7%	9.36	-2.50
Comm	10%	8%	5.31	-3.75

Manager takes a “risk off” positioning

- *Decrease exposure to riskier asset classes (equity and alternatives)*
- *Lower exposure to riskier segments (high yield bonds)*

Compare to:

Return 7.75

Risk: 7.35

Forward-Looking Analysis of Forecast

	Strategic Weights x Short Term Returns	Tactical Weights x Short Term Returns
Cash	0.00	0.15
Treasury	0.36	0.73
TIPS	0.26	0.53
AGG	0.58	0.86
HY	-0.14	-0.08
WGB xUS	0.31	0.44
Large US	-1.15	-0.92
Mid US	-0.43	-0.34
SC	-0.13	-0.08
Foreign Equity	-0.63	-0.31
EM Equity	-0.54	-0.32
REIT	-0.25	-0.18
Comm	-0.38	-0.30
	-2.11	0.17

- “Do Nothing” portfolio forecasts 211 bps loss from maintaining growth exposure
- *Tactical positioning forecasts 17 bps gain*
- *Excess return forecast: 228 bps*
- *What about expected **risk**?*

Attribution of Expected Tactical Opportunity



	Contribution to Excess Return	Contribution to Tracking Error	Efficiency
Cash	0.15	0.00	6.3%
Treasury	0.36	0.26	8.1%
TIPS	0.26	-0.02	12.0%
AGG	0.29	0.02	12.1%
HY	0.06	0.12	-1.3%
WGB xUS	0.13	-0.03	6.4%
Large US	0.23	0.58	-7.6%
Mid US	0.09	0.33	-6.4%
SC	0.05	0.36	-8.8%
Foreign Equity	0.31	0.79	-10.1%
EM Equity	0.22	0.34	-0.8%
REIT	0.08	0.34	-7.0%
Comm	0.08	0.21	-3.1%

2.28

3.31

- Forward-Looking Information Ratio: **0.69**
- *Some segments subtract tracking error*
- *Underweighting Equity contributed to excess return but detracted from active efficiency (esp. developed equity)*
- *Tactical bond positioning offset active equity inefficiency*

Insights into Asset Allocation Process

- **Strategic asset allocation:**
 - Legacy of quantitative rigor
 - Are emotionally-based constraints creating inefficiencies?
 - Do you really believe your capital markets assumptions?
- **Tactical asset allocation:**
 - Ignores quantitative analysis
 - Driven by directionality (*“We favor equity and lower-quality bonds.”*)
 - Zero focus on active risk

Can Performance Group contribute to more credible decisions?

Stephen Campisi, CFA



Steve.Campisi@thepensargroup.co

www.thepensargroup.co

262.226.5708

