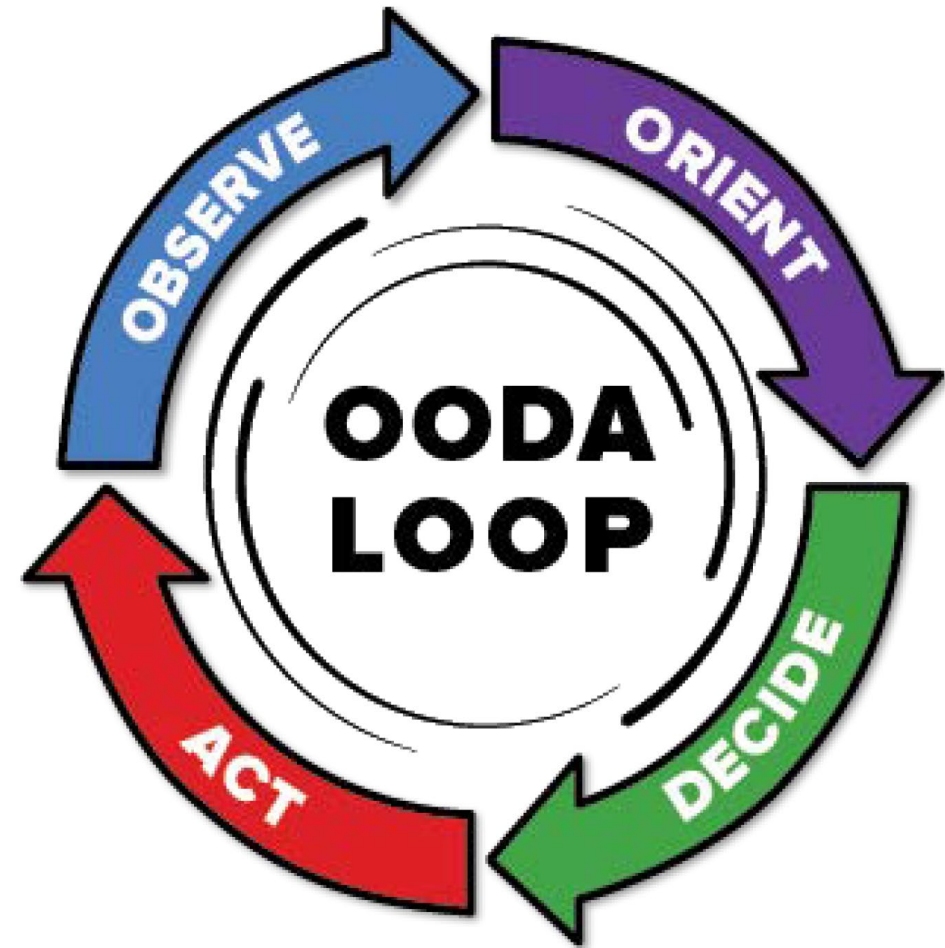


HEDGEYE



# Capital Allocation

Helping Investment Pros  
Deploy Capital  
Efficiently and Effectively



**David Salem – Managing Director**

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# Intro to Capital Allocation

## [ 1 ] Origins & Aims \*

## [ 2 ] Key Deliverables

## [ 3 ] Key To-Do's

\* **CA's** origins are discussed more fully in a *Real Conversation* between Hedgeye CEO Keith McCullough and CA head David Salem posted at: [youtube.com/watch?v=gLaImaCX7qI](https://www.youtube.com/watch?v=gLaImaCX7qI).

# Origins & Aims \*

## [ 1 ] How I Found and Used Hedgeye

- Search Criteria – see next slide
- “Red Team” Became **The Team**

## [ 2 ] How Patrons Use Capital Allocation

- Roles = Defense with Emphasis on Drawdown Avoidance, Offense or Both
- Time Horizons = Tactical (Trades), **Strategic (Trends & Tails)** & More (Policy)

## [ 3 ] How Tier 1 and 2 Patrons Also Use Capital Allocation

- Consults with CA Team (Tier 2) and Other Hedgeye Teams (Tier 1)
- Sector- or Company-Specific Read Throughs and Reality Checks

## Selection Criteria for Investment Research Providers

**Invert.** Most search criteria comprise coveted attributes only—like the specs for Yale’s presidential search circa 1950 that caused one alum to quip, “I didn’t know God was a Yale man.” The wiser course when conducting searches is to apply negative as well as positive screens, *in that order*, negative screens typically taking less time to apply than positive ones. David Salem did just this when using the criteria below to choose a primary research provider to boost his effectiveness as a CIO, forging a close relationship with Hedgeye that led ultimately to his hiring to build **Capital Allocation**.

### Disqualifying Attributes

- Advertising-driven revenue model
- Unable or unwilling to provide complete time-stamped record of past work

### Unfavorable Attributes

- Emphasis on narratives as distinct from data
- Embodies specific return forecasts or price targets for assets being analyzed

### Favorable Attributes

- Bayesian commitment to updating research ASAP after new data arrive
- Presumes economy and markets are complex (chaotic) systems
- • Proven capacity to withstand short-term performance pressures

### Essential Attributes

- Multi-factor, multi-duration analyses based solely on reported data
- Focus on rates of change (vs. levels) in macro variables being tracked
- Asset price changes trump fundamentals when crafting actionable ideas

# HEDGEYE OVERVIEW

We are focused on generating and delivering real-time investment ideas. We're composed of 40+ analysts, featuring some of the world's most regarded researchers. We combine quantitative, fundamental, and macro analysis with an emphasis on duration.



## MACRO STRATEGY



GAMING, LODGING & LEISURE



INDUSTRIALS MATERIALS



HEALTH CARE



MACRO POLICY



RETAIL



RESTAURANTS CANNABIS



COMMUNICATIONS, SOFTWARE



FINANCIALS HOUSING



CAPITAL ALLOCATION



REITs



CONSUMER STAPLES



TELECOM & MEDIA POLICY



MACRO CRYPTO HOUSING



GLOBAL TECHNOLOGY, SOFTWARE



DEMOGRAPHY



HEALTH POLICY



ENERGY

## DIFFERENTIATED PROCESS

### MULTI-FACTOR APPROACH

The marriage of proven research expertise with a quantitative/factor overlay to manage risk.

### REAL-TIME RESEARCH

Opportunistic idea generation and real-time research calls only = no maintenance research.

### BUY-SIDE PERSPECTIVE

Think and run business like the buy-side because we've been there.

## DISTINCTIVE CONTENT

### EMPHASIS ON DURATION

Calls across near-term (TRADE), intermediate-term (TREND), and longer-term (TAIL) durations.

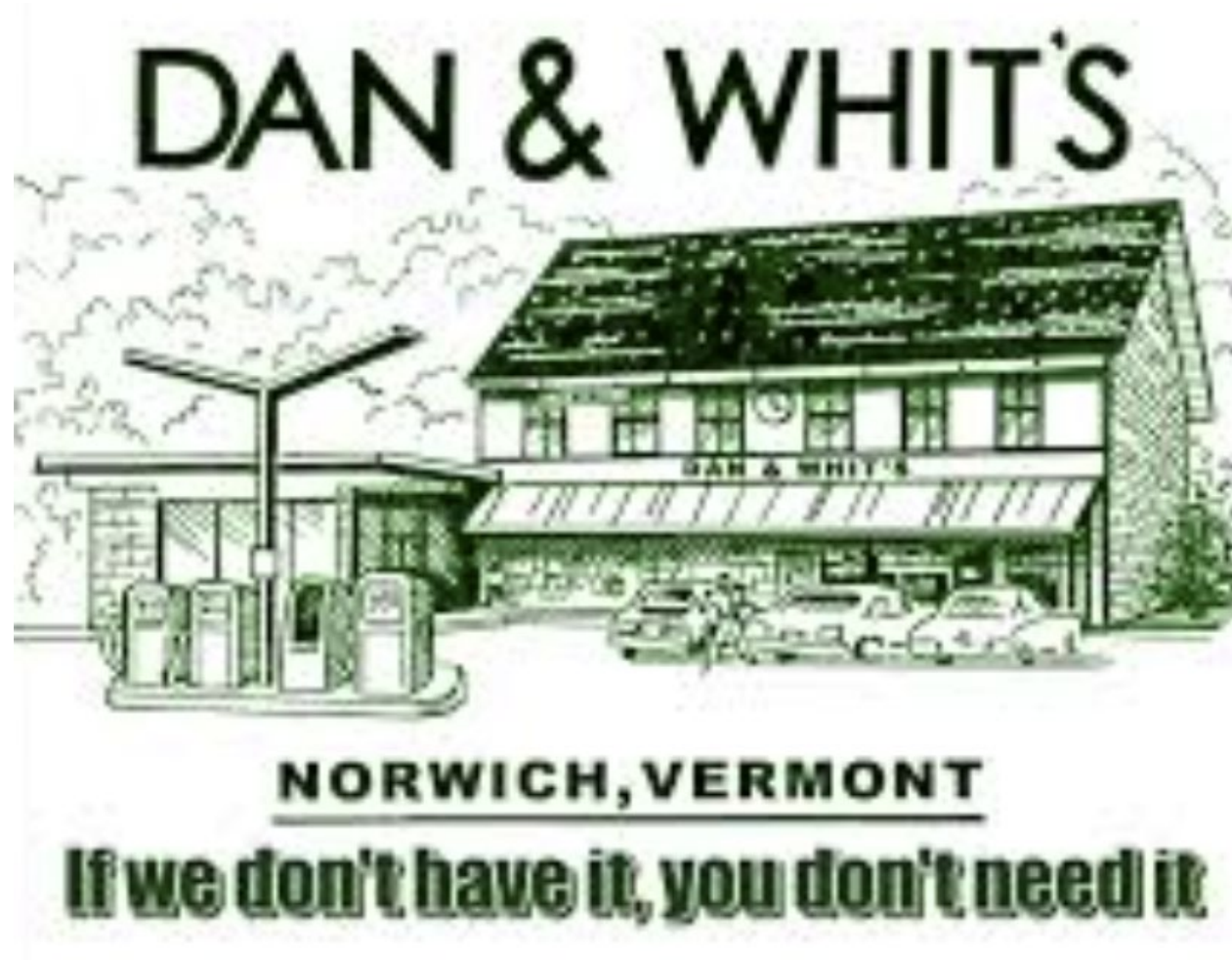
### DETAILED REPORTS

Thematic industry pieces and company specific deepdive Black Books incorporating macro analysis.

### NO RATINGS OR PRICE TARGETS

Allowing us to present data/information objectively and fluidly.

# My View of Hedgeye



# Capital Allocation Key Deliverables

Black = provided to all CA subscribers  
 Purple = provided to Tier 1 & Tier 2 subscribers only  
 Green = provided to Tier 1 subscribers only

	When	Description
<b>CA-Specific Elements</b>		
• Dashboards	2+ per month	See illustrative contents in Appendix C
• Musings	4+ per month	Facts and opinions germane to long-term investing
• Consult CA Team	On-demand	One 60-minute consult per quarter
• Consult CA Team	On-demand	Two additional 60-minute consults per quarter
• Consult Other Sector Teams	On-demand	Three 45-minute consults per quarter *
• Sector-Specific Black Books	On-demand	Three such books of a subscriber's choosing per quarter *
<b>Other Elements</b>		
• Risk Range™ Signals	Daily	Trade ranges & Trend levels for widely held exposures
• Early Look	Daily	Commentary on evolving economic & market conditions
• The Macro Show	Daily	30-minute webcast based on Early Look
• The Call @ Hedgeye	Daily	60-minute webcast featuring Hedgeye sector specialists
• The Morning Shift	Daily	Callouts on notable macro developments & ETF Pro re-ranks
• ETF Pro	Weekly	ETF-specific recommendations based on Hedgeye research
• Institutional Macro	Continuous	In-depth macroeconomic research



# Q2 2024 Macro Themes

Transitioning To Quad 2 Amid Higher-  
For-Longer Growth & Inflation Backdrop

March 21, 2024

Updated 05/31/2024



## MACRO

Keith McCullough    Christian Drake

Josh Steiner        Daryl Jones

Drago Malesevic    Ryan Ricci





# HEDGEYE CAPITAL ALLOCATION

## Dashboard As of 22 May 2024

	Page	As of *
Signals + Quads + Longer-Term Return Prospects .....	2	5.20.24
Return Prospects .....	3	5.20.24
Dual Constraint Model Portfolios .....	4	5.20.24
G-20 Growth, Inflation & Policy Model .....	5	5.16.24
EM Growth, Inflation & Policy Model .....	6	5.16.24
U.S. GDP Growth, Inflation & Quads .....	7	5.16.24
U.S. GDP Growth: Hedgeye vs. Consensus .....	8	5.16.24
U.S. Inflation: Hedgeye vs. Consensus .....	9	5.16.24
U.S. Monthly Quads .....	10	5.16.24
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5Y U.S. Treasury Yields & Breakevens .....	12	5.17.24
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Appraised Exposures' Return Tendencies By Quad .....	15	5.16.24
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### User Guide to Return Prospects

**Yield** = Current income yield on instrument as reported by **Factset**: an important variable in the total return projections discussed below.

**Drawdown Check** = In the CA team's opinion, there's a less than 25% probability the specified exposure will undergo a drawdown exceeding the "Check" over the interval specified in **Longer-Term Return Prospects**.

■ = **Positive** = instrument is 75+% likely in the CA team's opinion to produce a positive total return during specified interval.

■ = **Indeterminate** = conflicting inputs render a directional appraisal of the instrument infeasible.

■ = **Negative** = instrument is 75+% likely in the CA team's opinion to produce a negative total return during specified interval.

\* **Green** dates indicate **Elements** refreshed since prior edition of **Dashboard**.

# The Quads Are Global

## G20 GIP Model Summary

5/15/2024	Hedgeye Macro GIP Model Signals													GROWTH					Strength Of Signal				INFLATION						Strength Of Signal						
	Actuals									Estimates				Real GDP YoY					NTM Δ	Conditional Probability Of Est. Δ				Headline CPI YoY					NTM Δ	Conditional Probability Of Est. Δ					
	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24E	3Q24E	4Q24E	1Q25E	COUNTRY	1Q24	2Q24E	3Q24E	4Q24E	1Q25E	1Q25E Less 2Q24E	2Q24E	3Q24E	4Q24E	1Q25E	COUNTRY	1Q24	2Q24E	3Q24E	4Q24E	1Q25E	1Q25E Less 2Q24E	2Q24E	3Q24E	4Q24E	1Q25E
Argentina	3	2	3	3	3	3	2	3	3	2	4	1	1	Argentina	-4.51	-1.95	-3.42	-1.94	3.05	500bps	89	72	73	98	Argentina	272.77	302.94	#####	214.13	133.51	-16943bps	98	98	98	98
Australia	3	3	2	3	2	4	1	4	4	4	4	2	2	Australia	1.33	1.28	1.22	1.68	1.77	50bps	52	52	69	54	Australia	4.13	3.35	3.03	3.17	3.32	-3bps	98	86	65	67
Brazil	2	2	1	4	1	4	3	2	4	4	2	2	3	Brazil	2.00	1.67	1.94	2.38	1.91	24bps	59	58	62	63	Brazil	4.31	3.66	3.72	3.82	3.87	21bps	81	53	55	53
Canada	3	2	4	4	4	4	3	1	1	3	2	2	2	Canada	2.06	0.73	1.21	1.81	2.53	179bps	86	63	67	70	Canada	2.85	2.87	2.97	3.03	3.11	25bps	52	58	55	57
China	1	3	2	4	1	1	4	1	2	3	4	2	3	China	6.00	4.48	3.43	3.68	3.03	-145bps	81	71	55	63	China	0.00	0.23	0.10	0.65	0.77	53bps	64	58	83	57
Eurozone	2	3	3	3	4	4	4	1	1	1	1	2	2	Eurozone	0.40	0.42	0.59	0.86	1.32	90bps	50	54	56	61	Eurozone	2.60	2.48	2.20	2.31	2.56	8bps	57	68	57	66
France	3	3	3	3	2	1	4	1	1	4	1	2	3	France	1.07	0.81	0.92	1.22	1.06	25bps	58	53	59	55	France	3.00	2.31	2.30	2.74	2.81	50bps	98	51	88	57
Germany	2	3	3	3	1	4	4	1	4	1	1	2	2	Germany	-0.90	-0.19	0.11	0.89	1.02	122bps	67	57	69	53	Germany	2.70	2.43	2.40	3.07	3.12	69bps	66	52	90	53
India	3	2	4	4	2	1	3	1	4	2	1	2	3	India	6.51	6.59	6.80	6.96	6.73	14bps	51	54	53	54	India	5.01	5.12	3.93	4.72	4.86	-27bps	56	98	94	58
Indonesia	3	2	2	3	1	1	4	1	2	3	4	1	3	Indonesia	5.11	5.03	4.96	5.32	5.17	14bps	55	54	72	59	Indonesia	2.79	3.04	2.88	2.80	2.89	-15bps	66	61	55	56
Italy	3	3	3	3	1	4	1	1	4	1	2	2	3	Italy	0.60	0.90	1.03	1.13	1.03	14bps	57	53	53	52	Italy	0.97	0.88	1.07	1.72	1.89	101bps	55	61	88	61
Japan	3	2	3	3	1	4	4	4	4	4	1	1	3	Japan	0.40	-0.11	0.93	1.38	1.18	129bps	67	85	65	57	Japan	2.57	2.00	1.88	1.53	1.82	-18bps	92	59	76	71
Mexico	2	2	2	4	4	4	1	4	3	2	3	2	2	Mexico	1.63	2.33	1.85	2.22	2.60	27bps	63	59	57	57	Mexico	4.57	4.73	4.82	4.88	4.98	25bps	63	57	55	58
Russia	3	3	1	1	1	1	2	3	2	3	3	3	3	Russia	5.23	3.52	2.80	2.31	1.93	-158bps	90	67	62	59	Russia	7.62	8.00	8.07	8.13	8.13	13bps	60	52	52	50
South Africa	2	3	2	4	4	1	4	2	4	2	3	1	2	South Africa	0.73	0.81	0.66	1.63	2.17	135bps	52	54	73	63	South Africa	5.40	5.42	5.50	5.35	5.60	18bps	51	57	62	70
South Korea	3	3	2	4	4	1	1	2	1	4	4	2	3	South Korea	3.40	2.76	2.16	2.26	1.79	-96bps	79	77	55	71	South Korea	3.00	2.83	2.37	2.45	2.55	-28bps	65	93	58	59
Spain	3	2	3	4	1	4	4	2	1	3	1	2	3	Spain	2.40	2.06	2.16	2.31	1.94	-12bps	57	52	53	57	Spain	3.23	3.60	3.12	3.19	3.26	-34bps	71	78	54	54
Turkey	3	3	3	4	1	4	2	3	2	3	1	1	3	Turkey	5.50	2.18	2.25	2.41	1.43	-75bps	98	51	53	68	Turkey	66.81	71.88	51.09	43.31	44.06	-2782bps	98	98	98	57
United Kingdom	2	3	3	3	4	4	4	4	1	4	2	2	3	United Kingdom	0.20	0.04	0.50	1.34	1.19	114bps	53	57	63	52	United Kingdom	3.53	2.67	2.74	2.85	2.95	28bps	98	54	57	56
United States	3	3	4	4	1	1	1	1	4	2	3	3	2	United States	2.97	3.08	2.57	2.39	2.44	-65bps	55	72	58	52	United States	3.24	3.44	3.56	3.83	4.07	63bps	65	59	71	68
MODE/MEDIAN	3	3	3	4	1	4	4	1	4	4	1	2	3	MODE/MEDIAN	1.82	1.47	1.54	2.02	1.92	45bps	59	57	60	58	MODE/MEDIAN	3.24	3.19	3.00	3.12	3.19	-1bps	66	59	64	57

Data Source: Government Statistic Agencies, BIS, World Bank, and IMF. Intellectual Property of Hedgeye Risk Management.

LIGHT BLUE header = Hedgeye Nowcast Model estimates. BLUE header = Hedgeye Comparative Base Effects Model estimates. GREEN/RED shading in GDP and CPI projections denotes sequential acceleration/deceleration.

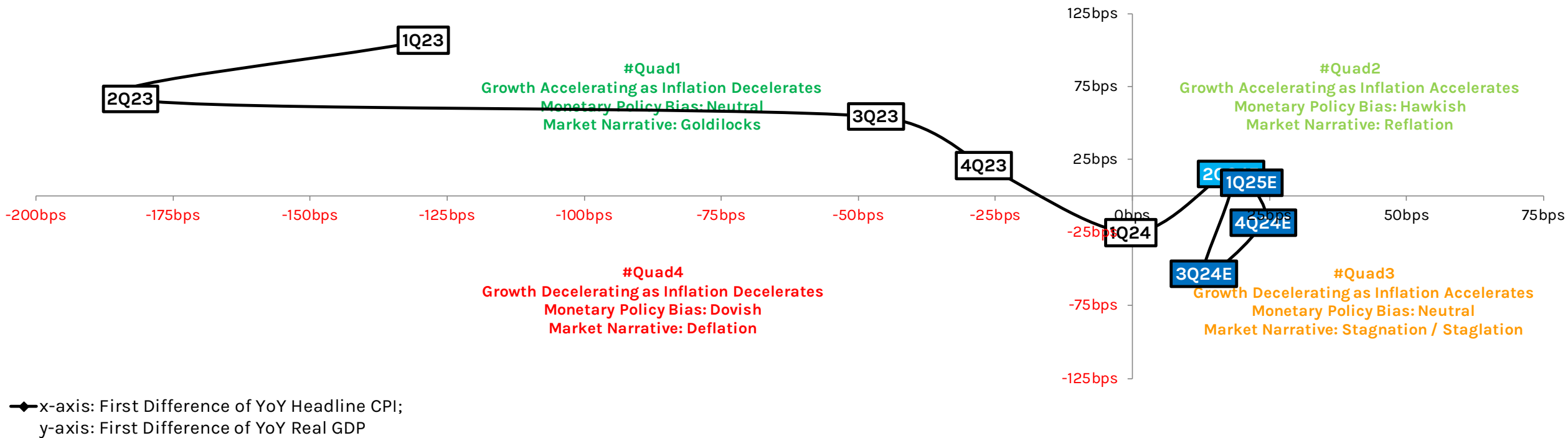
Conditional probability inversely proportional to the prior base rate's percentile score within a 95% confidence interval band around the projected GROWTH or INFLATION rate in a given quarter.

# What Are The Quads?

Our GIP Model is a quantitatively oriented, regime-based framework that helps investors proactively prepare for volatility phase transitions within and across asset classes by triangulating the three factors that matter most to Macro Risk Management – i.e. GROWTH, INFLATION, and POLICY.

United States	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24	← Actuals   Estimates →	2Q24E	3Q24E	4Q24E	1Q25E
Real GDP QoQ SAAR	6.20%	3.30%	7.00%	-2.00%	-0.60%	2.70%	2.60%	2.20%	2.10%	4.90%	3.40%	1.30%	Real GDP QoQ SAAR	2.32%	2.71%	2.66%	1.96%
Real GDP YoY	11.95%	4.74%	5.42%	3.57%	1.87%	1.71%	0.65%	1.72%	2.38%	2.93%	3.13%	2.88%	Real GDP YoY	3.03%	2.50%	2.32%	2.41%
2yr Comparative Base Effects	-2.69%	0.60%	1.05%	1.40%	2.21%	1.63%	2.17%	2.57%	6.91%	3.22%	3.04%	2.64%	2yr Comparative Base Effects	2.13%	2.32%	1.89%	2.30%
Headline CPI YoY	4.85%	5.34%	6.69%	7.96%	8.63%	8.33%	7.10%	5.81%	3.98%	3.51%	3.24%	3.24%	Headline CPI YoY	3.42%	3.55%	3.79%	4.01%
2yr Comparative Base Effects	1.09%	1.49%	1.64%	2.01%	2.61%	3.28%	3.96%	4.93%	6.74%	6.83%	6.90%	6.89%	2yr Comparative Base Effects	6.31%	5.92%	5.17%	4.53%

## United States



Data Source: BEA, BLS Light Blue box = Hedgeye Nowcast Model estimate. Dark Blue boxes = Hedgeye Comparative Base Effects Model estimates.

# Signals + Quads + Other Inputs --> Return Prospects

Signals / Quads / L-T Return Prospects as of 20 May 2024				Signals										Quads					Longer-Term Return Prospects								
				Above + Last Price Exceeds Level										Below + Level Exceeds Last Price													
	Ticker	Price *	Δ in Price vs Appraisal Date	Trend Level	Δ in Level vs Prior	Price vs. Trend	Current Status	Change vs. Prior	Tail Level	Δ in Level vs Prior	Price vs. Tail	Current Status	Change vs. Prior	Country Defining Quad	2Q24E	Probability of Quad	3Q24E	Probability of Quad	4Q24E	Probability of Quad	1Q25E	Probability of Quad	Refreshed Long-Term Return Prospect (Now through 3/31/25)	Change vs. Prior Prospect	Prior Prospect (April 2024)		
<b>Currencies</b>																											
	Invesco DB US Dollar Index Bullish Fund	UUP	\$ 28.60	-1.00%	28.11	1.63%	1.74%	Above	==	27.68	1.76%	3.32%	Above	==	USA	2	36%	3	43%	3	41%	2	36%	Positive	▲	Indeterminate	
	Invesco CurrencyShares Euro Trust	FXE	\$ 100.30	1.42%	99.41	-0.79%	0.90%	Above	▲	98.91	-0.08%	1.41%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▼	Positive	
	Invesco CurrencyShares Japanese Yen Trust	FXJ	\$ 59.24	1.01%	61.98	-1.07%	-4.42%	Below	▲	63.77	-0.93%	-7.10%	Below	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	==	Indeterminate	
	Invesco CurrencyShares Swiss Franc Trust	FXF	\$ 97.70	0.37%	99.76	-1.43%	-2.06%	Below	▲	99.78	-0.35%	-2.08%	Below	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	==	Indeterminate	
	Invesco CurrencyShares British Pound Sterling Trust	FXB	\$ 122.30	1.65%	121.00	-0.80%	1.07%	Above	▲	120.00	0.55%	1.92%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Positive	▲	Positive	
	SPDR Gold Shares	GLD	\$ 224.56	3.67%	199.00	6.42%	12.84%	Above	▲	192.00	4.35%	16.96%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Positive	▲	Positive	
<b>Commodities</b>																											
	iShares S&P GSCI Commodity Indexed Trust	GSG	\$ 22.52	-0.66%	21.52	2.18%	4.65%	Above	▲	21.13	1.25%	6.58%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Positive	▲	Positive	
	United States Oil Fund LP	USO	\$ 76.73	-4.55%	75.68	3.67%	1.93%	Above	▲	73.96	2.37%	5.17%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
	United States Natural Gas Fund LP	UNG	\$ 19.82	-40.97%	17.15	-9.16%	15.57%	Above	▲	25.77	-6.77%	-23.09%	Below	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
	Invesco DB Agriculture Fund	DBA	\$ 23.74	-8.83%	23.70	5.80%	0.17%	Above	▲	21.92	4.16%	8.30%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Positive	▲	Positive	
	Invesco DB Base Metals Fund	DBB	\$ 21.63	6.87%	18.43	6.29%	17.36%	Above	▲	17.97	2.82%	20.37%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Positive	▲	Indeterminate	
	iShares Silver Trust	SLV	\$ 28.98	16.43%	23.00	7.38%	26.00%	Above	▲	21.84	2.30%	32.69%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
	Global X Uranium ETF	URA	\$ 33.21	12.58%	28.48	0.89%	16.61%	Above	▲	25.91	2.94%	28.17%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Positive	▲	Positive	
	Vaneck Rare Earth and Strategic Metals ETF	REMEX	\$ 56.44	12.10%	52.75	-1.29%	7.00%	Above	▲	61.92	-2.29%	-8.85%	Below	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
	ProShares Bitcoin Strategy ETF	BITO	\$ 28.47	2.78%	25.49	4.04%	11.69%	Above	▲	20.23	5.04%	40.73%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
	Grayscale Ethereum Trust (ETH)	ETHE	\$ 28.71	27.77%	24.03	3.85%	19.48%	Above	▲	18.47	4.71%	55.44%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
<b>Bonds</b>																											
	iShares Core U.S. Aggregate Bond ETF	AGG	\$ 96.68	1.42%	96.48	-0.42%	0.21%	Above	▲	95.88	-0.13%	0.83%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▼	Positive	
	iShares 1-3 Year Treasury Bond ETF	SHY	\$ 81.40	0.23%	81.20	-0.21%	0.25%	Above	▲	80.46	-0.14%	1.17%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Positive	▲	Positive	
	iShares 7-10 Year Treasury Bond ETF	IEF	\$ 92.97	1.62%	93.41	-0.85%	-0.47%	Below	▲	93.14	-0.76%	-0.18%	Below	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
	iShares 20+ Year Treasury Bond ETF	TLT	\$ 91.12	3.26%	94.00	0.05%	-3.06%	Below	▲	91.98	-3.37%	-0.93%	Below	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
	iShares iBoxx \$ High Yield Corporate Bond ETF	HYG	\$ 77.32	0.91%	76.53	0.21%	1.03%	Above	▲	74.13	0.30%	4.30%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
	iShares Preferred & Income Securities ETF	PFF	\$ 31.66	1.70%	31.43	-0.16%	0.73%	Above	▲	30.49	0.13%	3.84%	Above	▲	USA	2	32%	3	52%	3	30%	2	36%	Indeterminate	▼	Positive	
	iShares TIPS Bond ETF	TIP	\$ 106.54	0.72%	106.00	-0.59%	0.51%	Above	▲	106.00	0.01%	0.51%	Above	▲	USA	2	52%	3	71%	3	31%	2	42%	Positive	▲	Positive	
	*** Vanguard Total International Bond ETF	BNDX	\$ 48.69	0.52%	48.67	-0.12%	0.04%	Above	▲	47.90	-0.04%	1.65%	Above	▲	World Median	3	29%	4	37%	2	32%	3	40%	Positive	▲	Positive	
	*** SPDR FTSE International Government Inflation-Protect	WIP	\$ 39.71	2.21%	39.52	-1.08%	0.48%	Above	▲	38.47	-0.58%	0.61%	Above	▲	World Median	3	42%	4	37%	2	33%	3	35%	Positive	▲	Positive	
	*** iShares JP Morgan USD Emerging Markets Bond ETF	EMB	\$ 89.42	2.07%	88.03	0.85%	1.58%	Above	▲	84.99	0.06%	5.21%	Above	▲	EM Median	2	42%	4	37%	2	33%	3	35%	Positive	▲	Positive	
<b>Global &amp; Non-US Stocks</b>																											
	*** iShares MSCI Emerging Markets ex China ETF	EMXC	\$ 59.70	3.88%	55.75	1.27%	5.29%	Above	▲	53.35	1.00%	10.03%	Above	▲	EM Median	2	42%	4	37%	2	33%	3	35%	Positive	▲	Positive	
	iShares MSCI Japan ETF	EWJ	\$ 454.91	5.55%	432.00	2.13%	5.90%	Above	▲	385.00	2.60%	15.77%	Above	▲	Japan	2	43%	3	50%	3	41%	2	36%	Positive	▲	Positive	
	iShares JPMi Nikkei 400 ETF	JPNX	\$ 73.40	3.41%	71.44	1.45%	2.74%	Above	▲	67.20	1.36%	9.22%	Above	▲	Japan	2	62%	1	50%	1	50%	3	40%	Positive	▲	Positive	
	iShares MSCI Japan Small-Cap ETF	SCJ	\$ 73.03	1.70%	72.65	0.89%	0.52%	Above	▲	70.00	0.70%	4.33%	Above	▲	Japan	4	62%	1	50%	1	50%	3	40%	Positive	▲	Positive	
	iShares China Large-Cap ETF	FXI	\$ 29.01	12.14%	25.04	6.64%	15.85%	Above	▲	25.06	-0.71%	15.76%	Above	▲	China	3	52%	4	41%	2	46%	3	36%	Indeterminate	▲	Indeterminate	
	KraneShares CSI China Internet ETF	KWEB	\$ 31.89	10.73%	26.86	5.00%	18.73%	Above	▲	26.81	-0.63%	18.95%	Above	▲	China	3	52%	4	41%	2	46%	3	36%	Indeterminate	▲	Indeterminate	
	iShares MSCI Hong Kong ETF	EWH	\$ 17.99	12.58%	15.99	-2.74%	12.51%	Above	▲	17.11	-1.10%	5.14%	Above	▲	Hong Kong	2	32%	1	52%	3	30%	3	36%	Indeterminate	▲	Indeterminate	
	iShares MSCI India ETF	INDA	\$ 53.12	1.53%	50.16	2.03%	5.90%	Above	▲	47.50	1.50%	11.83%	Above	▲	India	2	29%	1	52%	2	49%	3	31%	Positive	▲	Positive	
	iShares MSCI South Korea ETF	EWY	\$ 65.24	3.00%	63.91	0.79%	2.08%	Above	▲	62.22	1.34%	4.85%	Above	▲	S. Korea	4	52%	4	71%	2	31%	3	42%	Indeterminate	▼	Positive	
	*** Vanguard FTSE Europe ETF	VGK	\$ 70.06	5.53%	64.86	1.34%	8.02%	Above	▲	61.98	1.59%	13.04%	Above	▲	Eurozone	1	29%	1	37%	2	32%	2	40%	Positive	▲	Positive	
	iShares MSCI United Kingdom ETF	EWU	\$ 36.62	5.14%	33.21	0.98%	10.27%	Above	▲	32.21	0.75%	13.69%	Above	▲	UK	4	51%	2	31%	2	36%	3	29%	Positive	▲	Positive	
	iShares MSCI Germany ETF	EWG	\$ 32.38	4.59%	30.09	1.29%	7.61%	Above	▲	28.92	1.33%	11.96%	Above	▲	Germany	1	44%	1	30%	2	62%	2	28%	Positive	▲	Positive	
	iShares MSCI France ETF	EWQ	\$ 42.25	3.88%	39.59	0.46%	6.72%	Above	▲	37.99	0.45%	11.21%	Above	▲	France	4	56%	1	27%	2	52%	3	31%	Positive	▲	Positive	
	iShares MSCI Canada ETF	EWC	\$ 38.62	2.63%	36.99	1.20%	4.41%	Above	▲	35.73	1.39%	8.09%	Above	▲	Canada	3	45%	2	37%	2	37%	2	40%	Positive	▲	Positive	
	iShares MSCI Australia ETF	EWA	\$ 25.09	5.78%	23.91	1.74%	4.94%	Above	▲	22.98	0.92%	9.18%	Above	▲	Australia	4	51%	4	45%	2	45%	2	36%	Positive	▲	Positive	
	Vaneck Gold Miners ETF	GDX	\$ 37.24	7.69%	30.43	5.04%	22.38%	Above	▲	28.86	3.68%	24.72%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Positive	▲	Indeterminate	
	*** Vaneck Agribusiness ETF	MOO	\$ 74.39	3.64%	73.28	-3.91%	1.51%	Above	▲	75.45	-3.28%	-1.40%	Below	▲	World Median	3	71%	4	52%	2	50%	3	37%	Negative	▼	Indeterminate	
	iShares MSCI Malaysia ETF	EWM	\$ 23.42	5.12%	21.59	1.79%	8.48%	Above	▲	21.26	1.09%	10.16%	Above	▲	Malaysia	2	48%	4	32%	2	33%	2	31%	Positive	▲	Positive	
	iShares MSCI Brazil ETF	EWZ	\$ 31.66	0.38%	32.34	-0.89%	-2.10%	Below	▲	31.37	0.42%	0.92%	Above	▲	Brazil	4	48%	2	31%	2	34%	3	33%	Indeterminate	▲	Positive	
	iShares MSCI South Africa ETF	EZA	\$ 44.14	10.24%	39.32	1.21%	12.26%	Above	▲	38.99	-1.34%	13.21%	Above	▲	South Africa	2	27%	3	30%	1	45%	2	44%	Indeterminate	▲	Indeterminate	
<b>US Stocks</b>																											
	SPDR S&P 500 ETF Trust	SPY	\$ 530.06	4.29%	499.00	1.42%	6.22%	Above	▲	468.00	0.43%	13.26%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
	Invesco QQQ Trust Series 1	QQQ	\$ 454.91	5.55%	432.00	2.13%	5.90%	Above	▲	385.00	2.60%	15.77%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
	iShares Russell 2000 ETF	IWM	\$ 209.54	5.13%	203.00	-0.40%	2.73%	Above	▲	204.00	3.55%	2.23%	Above	▲	USA	2	36%	3	43%	3	41%	2	36%	Indeterminate	▲	Indeterminate	
	iShares Russell 2000 Growth ETF	IWO	\$ 267.35	5.63%	255.00	1.59%	4.84%	Above	▲	254.00	4.96%	5.26%	Above	▲	USA	2	36%	3	43%	3	41%						

# Return Prospects

## Primary Variables

- **Quads = Real GDP Growth & Inflation**
  - Past, Current & Projected Quads
  - Conditional Probabilities of Accels or Decels
  - Absolute Levels of Projected GDP and Quads
- **Signals = Trends & Tails**
  - Current Prices vs. Levels
  - Evolving Divergences from Levels
  - Evolving Levels
    - Absolute
    - Relative to each other

## Other Variables

- **Consensus Positioning (via CFTC data)**
- **Implied Volatilities (Absolute and vs. History)**
- **Trade Ranges**
  - Recent Changes
  - Relative to Trend and Tail Levels
- **Status vis ETF Pro and Portfolio Solutions**
- **Read-Throughs from Hedgeye Sector Specialists**
- **Insights from Hedgeye Policy Analysts**
- **Perceived Zeitgeist**

# A Deeper Dive Into Return Tendencies by Quad



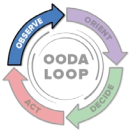
Hedgeye Macro US GIP Model Backtest	EV by Quadrant				Shallow GDP Δ				Deep GDP Δ				Fed Easing				Fed On Hold				Fed Tightening				Quad 1 Prior				Quad 2 Prior				Quad 3 Prior				Quad 4 Prior				China Quad							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
S&P 500 INDEX (SPY)	6.0%	4.4%	-0.1%	-1.8%	1.6%	4.2%	2.0%	5.2%	9.0%	3.4%	-4.8%	-11.4%	8.6%	7.7%	0.6%	-6.7%	3.4%	1.5%	-2.8%	-0.6%	5.0%	2.9%	3.8%	1.8%	10.0%	6.1%	0.4%	1.2%	2.9%	6.7%	2.0%	-5.9%	3.1%	-0.6%	-3.2%	-3.6%	8.6%	3.9%	5.7%	-0.6%	3.2%	4.3%	-1.7%	1.6%				
Communication Services (XLC)	6.2%	0.7%	-1.1%	-0.3%	4.3%	1.6%	3.4%	8.2%	6.4%	4.1%	-7.0%	-10.0%	9.3%	4.0%	1.2%	-5.0%	2.4%	-2.6%	-1.5%	3.2%	5.0%	4.8%	1.2%	1.4%	3.1%	-1.8%	4.5%	4.2%	1.9%	-3.5%	3.0%	-6.0%	-3.2%	0.6%	7.5%	-5.6%	3.3%	-1.9%	2.5%	2.8%	-1.5%	0.9%	2.4%	1.6%				
Consumer Cyclical (XLY)	7.3%	4.5%	-0.5%	-0.6%	0.4%	1.5%	5.8%	1.5%	3.7%	-5.8%	-3.7%	-10.6%	10.1%	7.4%	-1.0%	-3.7%	-5.0%	0.7%	-1.6%	-0.7%	5.0%	4.6%	1.5%	2.1%	13.7%	6.6%	1.0%	1.7%	1.7%	-1.2%	-5.6%	1.7%	-2.4%	-3.1%	-3.8%	12.3%	2.9%	6.0%	2.1%	4.2%	4.6%	-1.8%	-1.8%	2.4%				
Consumer Non-Cyclical (XLP)	4.7%	2.1%	0.4%	0.9%	0.7%	-2.3%	1.5%	6.7%	7.8%	4.9%	-0.3%	-2.3%	6.9%	4.0%	0.8%	-3.3%	3.7%	-0.9%	0.2%	8.2%	3.7%	1.3%	0.2%	0.8%	8.9%	3.3%	0.4%	3.5%	3.1%	2.0%	-1.5%	-3.5%	1.4%	1.9%	0.3%	2.3%	5.9%	-2.6%	4.9%	0.0%	1.7%	3.1%	0.9%	1.9%				
Energy (XLE)	5.7%	5.2%	2.4%	-4.7%	2.5%	3.2%	5.5%	2.4%	6.8%	3.3%	-2.1%	-8.1%	6.3%	11.9%	8.2%	-13.1%	3.1%	2.6%	-4.3%	12.6%	13.9%	-1.6%	6.7%	-0.2%	4.5%	0.7%	3.3%	-4.9%	2.4%	10.2%	8.1%	-24.9%	3.8%	2.8%	-2.3%	-1.0%	10.4%	2.3%	6.7%	-2.3%	7.7%	4.6%	-3.7%	1.1%				
Financials (XLF)	5.6%	4.3%	-0.7%	-2.3%	-0.4%	0.9%	-0.7%	3.1%	10.2%	2.8%	-1.5%	-14.4%	8.1%	8.4%	-1.9%	-9.9%	3.6%	4.1%	-1.6%	1.4%	4.0%	-1.5%	3.1%	2.5%	1.2%	4.0%	0.5%	1.6%	1.4%	10.3%	6.2%	-13.8%	0.6%	-4.4%	-6.7%	-2.7%	8.6%	4.6%	5.5%	-0.6%	1.7%	5.0%	-3.9%	1.8%				
Health Care (XLV)	5.4%	4.0%	0.0%	0.7%	3.1%	1.9%	-0.5%	7.3%	6.2%	5.7%	-2.1%	-4.6%	7.6%	7.7%	1.3%	-4.1%	3.5%	-0.7%	-1.1%	7.3%	4.0%	3.8%	1.0%	1.7%	7.2%	5.9%	0.5%	4.5%	2.7%	2.7%	2.0%	0.9%	4.8%	4.4%	-2.1%	1.9%	6.9%	0.9%	2.7%	-1.6%	1.8%	3.7%	-0.7%	3.5%				
Industrials (XLI)	6.2%	4.8%	-0.2%	-2.0%	1.1%	1.6%	2.1%	6.4%	8.6%	4.5%	-4.4%	-11.5%	9.0%	8.6%	0.4%	-6.5%	2.9%	2.6%	-3.2%	-0.7%	5.5%	1.8%	5.1%	1.2%	9.1%	6.8%	0.4%	0.0%	4.2%	6.9%	1.9%	-8.5%	3.1%	-0.2%	-3.1%	-3.0%	8.3%	4.1%	5.3%	-0.4%	2.8%	5.7%	-1.9%	0.6%				
Information Technology (XLK)	7.6%	7.5%	0.5%	-2.7%	2.7%	12.4%	4.4%	4.9%	12.4%	3.8%	-6.9%	-15.2%	12.0%	9.1%	1.1%	-6.4%	2.9%	3.9%	-2.2%	-8.6%	5.0%	9.0%	6.3%	3.5%	13.8%	10.5%	-0.5%	0.1%	5.0%	9.3%	4.6%	-1.6%	3.3%	0.7%	-2.6%	10.4%	10.0%	12.9%	8.5%	1.7%	4.1%	5.2%	-0.7%	3.3%				
Materials (XLB)	6.3%	4.0%	-0.2%	-0.7%	1.0%	2.2%	5.0%	1.7%	10.2%	2.7%	-7.9%	-12.1%	6.9%	8.5%	3.1%	-7.6%	5.5%	1.7%	-5.1%	5.4%	7.2%	-0.2%	3.9%	2.2%	5.7%	8.3%	2.8%	-5.2%	4.7%	5.8%	-1.2%	-1.9%	2.0%	-3.0%	-4.0%	1.6%	11.8%	3.7%	5.6%	2.2%	6.8%	4.7%	-2.2%	-0.2%				
REITs (XLRE)	5.1%	3.2%	-2.1%	-2.1%	2.6%	0.0%	2.3%	7.2%	12.7%	8.6%	-5.8%	-16.1%	9.6%	8.3%	-3.2%	-24.9%	1.4%	-1.0%	-2.3%	5.8%	-	0.2%	0.8%	2.8%	-	0.2%	-0.5%	-	-	3.5%	-1.5%	-12.7%	2.6%	14.9%	-1.5%	5.8%	12.7%	-1.8%	0.8%	4.4%	5.4%	2.6%	-4.9%	0.7%				
Utilities (XLU)	3.9%	0.5%	3.0%	0.1%	4.6%	-1.0%	4.2%	8.0%	1.5%	1.6%	4.0%	-5.0%	5.5%	3.8%	3.1%	-6.5%	3.1%	3.1%	-3.7%	-1.1%	5.9%	2.2%	0.4%	6.6%	3.1%	3.1%	2.8%	-0.1%	10.7%	10.1%	9.7%	-5.6%	1.1%	-0.2%	1.3%	1.2%	2.5%	-5.9%	7.6%	-2.8%	3.2%	3.3%	-1.2%	0.2%				
Growth (IWF)	6.4%	5.8%	-0.4%	-2.5%	1.5%	7.5%	1.9%	5.3%	10.4%	4.2%	-6.4%	-1.1%	9.5%	8.0%	0.7%	-7.0%	3.3%	2.2%	-3.4%	-5.2%	4.8%	6.5%	3.8%	2.7%	11.5%	8.3%	0.2%	1.1%	3.0%	7.8%	1.7%	-2.5%	2.6%	0.4%	-3.6%	-7.0%	9.2%	4.6%	5.9%	-0.5%	2.9%	4.8%	-1.5%	1.6%				
Value (IWD)	5.9%	3.2%	0.2%	-1.4%	1.7%	0.8%	2.1%	5.0%	8.3%	2.5%	-3.1%	-10.4%	7.9%	7.5%	0.8%	-6.9%	3.8%	1.0%	-2.3%	3.1%	5.6%	-3.9%	4.5%	1.3%	8.8%	4.4%	0.5%	1.5%	2.5%	6.1%	3.2%	-10.5%	2.8%	-2.6%	-3.1%	-0.8%	8.5%	3.5%	6.0%	-0.6%	3.8%	4.2%	-2.4%	1.4%				
Volicals (RSP)	7.0%	5.4%	-0.2%	-3.4%	1.6%	6.0%	2.4%	4.1%	12.1%	2.9%	-6.4%	-16.4%	10.0%	9.1%	1.5%	-9.1%	3.6%	2.3%	-4.3%	-4.6%	6.1%	3.4%	5.2%	2.4%	12.2%	7.3%	0.8%	0.5%	2.7%	9.1%	3.7%	-8.6%	2.9%	-2.6%	-4.9%	-7.1%	10.7%	7.6%	7.0%	-0.7%	4.1%	5.2%	-3.2%	1.4%				
Defensives (DEF)	5.4%	3.7%	0.0%	-0.5%	2.3%	2.7%	1.5%	6.1%	7.1%	3.8%	-3.4%	-7.6%	7.6%	6.4%	0.1%	-4.7%	3.4%	0.8%	-1.7%	2.1%	4.5%	2.9%	3.1%	1.9%	8.4%	5.4%	0.0%	1.9%	2.7%	4.9%	1.1%	-4.2%	3.7%	0.7%	-1.9%	-1.1%	7.2%	0.6%	5.0%	0.0%	2.6%	3.8%	-0.5%	1.7%				
High Beta (SPHB)	8.5%	7.9%	-0.9%	-4.6%	1.5%	7.8%	2.2%	3.3%	4.1%	4.2%	-7.7%	-20.3%	13.7%	13.6%	1.4%	-10.7%	2.7%	3.6%	-6.8%	-9.0%	4.5%	4.3%	6.9%	2.9%	13.0%	7.2%	-0.8%	-2.1%	2.9%	13.0%	-15.6%	3.8%	-3.2%	-8.1%	-11.5%	13.3%	12.2%	11.3%	2.4%	4.2%	6.8%	-4.4%	1.8%					
Low Beta (SPLV)	4.6%	2.2%	1.0%	1.5%	3.1%	-1.0%	2.1%	7.7%	5.3%	4.4%	0.4%	-4.0%	5.6%	5.3%	0.5%	-2.7%	4.4%	-0.3%	0.1%	7.2%	3.1%	0.6%	3.6%	2.3%	5.9%	4.2%	-0.5%	4.8%	2.2%	2.4%	2.2%	-7.0%	4.2%	0.8%	0.8%	2.2%	5.6%	-2.5%	4.9%	1.8%	3.6%	3.3%	0.4%	1.6%				
Momentum (MTUM)	7.0%	5.0%	0.7%	-3.7%	2.8%	7.7%	3.2%	6.2%	10.5%	3.6%	-5.5%	-14.3%	9.0%	6.2%	0.9%	-8.1%	5.3%	1.3%	-2.0%	-5.2%	7.1%	7.6%	5.5%	1.0%	13.3%	6.3%	1.8%	1.2%	3.6%	8.1%	1.7%	-2.0%	3.7%	-0.7%	-2.7%	-7.3%	9.0%	3.5%	7.9%	-3.2%	3.7%	4.2%	-1.3%	2.3%				
Quality (QUAL)	6.4%	4.6%	0.2%	-0.3%	3.1%	2.8%	2.3%	6.3%	9.1%	4.9%	-4.1%	-8.2%	9.0%	7.5%	1.2%	-4.7%	3.9%	1.7%	-2.3%	2.5%	5.7%	7.3%	3.6%	2.2%	9.6%	6.0%	0.8%	1.4%	3.8%	5.9%	1.8%	-3.9%	4.7%	1.8%	-2.5%	-1.6%	8.2%	1.8%	5.8%	0.9%	3.3%	4.8%	-0.3%	1.9%				
Dividend Yield (SDY)	6.2%	3.1%	0.1%	1.2%	1.8%	0.1%	1.5%	6.8%	9.2%	3.7%	-1.8%	-5.1%	8.2%	7.4%	0.0%	-2.9%	4.6%	0.6%	-1.0%	6.6%	5.4%	-0.5%	2.4%	2.1%	9.0%	5.2%	-0.2%	2.8%	2.4%	4.8%	0.2%	-7.7%	3.8%	-1.2%	-0.8%	2.2%	9.2%	0.5%	4.3%	2.2%	3.8%	4.0%	-0.3%	2.1%				
Size (DEF)	6.0%	4.6%	-0.2%	-2.0%	1.2%	5.2%	1.9%	5.1%	8.6%	3.4%	-5.0%	-10.6%	8.8%	7.4%	0.2%	-6.5%	3.0%	1.8%	-2.5%	-0.4%	5.1%	3.8%	1.1%	1.0%	10.0%	6.2%	0.4%	0.5%	3.2%	6.8%	1.9%	-4.2%	2.7%	0.0%	-3.0%	-2.6%	8.4%	3.9%	4.8%	-1.2%	2.8%	4.2%	-1.4%	1.8%				
Secular Growth (QQQ)	6.3%	7.6%	0.3%	-2.9%	3.1%	14.7%	3.1%	4.9%	9.2%	3.2%	-6.4%	-13.6%	10.9%	9.2%	1.0%	-6.7%	0.7%	3.0%	-4.5%	-8.4%	5.1%	11.3%	7.5%	3.4%	9.5%	10.0%	-2.2%	0.3%	5.5%	11.5%	6.0%	-0.8%	2.8%	-0.4%	-2.8%	-9.7%	8.4%	10.7%	8.8%	0.6%	3.9%	5.3%	-0.4%	1.5%				
Mid-Caps (MDY)	7.0%	5.2%	0.5%	-1.8%	2.1%	3.8%	2.5%	4.8%	12.7%	3.6%	-3.7%	-12.6%	8.9%	9.2%	2.0%	-6.4%	5.1%	2.4%	-3.6%	-1.5%	6.5%	1.3%	6.4%	2.1%	12.2%	5.8%	0.2%	1.9%	1.4%	9.4%	4.7%	-12.9%	3.3%	-1.7%	-4.2%	-10.9%	4.1%	6.7%	1.4%	5.5%	6.0%	-2.3%	0.9%	0.9%				
Small-Caps (IWM)	6.2%	5.7%	-0.7%	-2.0%	1.7%	5.9%	1.6%	5.6%	10.8%	2.3%	-5.8%	-13.9%	7.6%	9.5%	0.5%	-5.6%	5.1%	2.7%	-4.8%	-1.5%	5.4%	3.5%	5.6%	0.8%	9.9%	7.3%	-0.5%	3.5%	0.6%	10.6%	0.8%	-13.5%	2.1%	-3.8%	-3.5%	-5.1%	11.4%	9.0%	7.0%	1.0%	6.0%	4.6%	-2.9%	0.8%				
BARCLAYS AGG (AGG)	1.2%	0.4%	0.6%	2.3%	1.4%	0.0%	0.8%	1.8%	1.6%	0.9%	0.1%	-2.8%	1.5%	0.4%	0.3%	2.5%	1.6%	0.4%	0.9%	3.1%	0.4%	0.2%	0.3%	1.7%	0.7%	0.4%	0.6%	2.3%	1.3%	-0.4%	0.3%	1.6%	1.3%	1.4%	0.6%	3.1%	1.5%	0.5%	1.1%	1.8%	1.0%	0.9%	1.0%	1.2%	1.0%	1.0%	0.2%	1.0%
Leveraged Loans (BKLN)	2.1%	1.8%	0.4%	0.5%	1.4%	1.1%	1.5%	1.8%	1.4%	1.0%	-1.0%	-7.5%	1.4%	2.6%	2.3%	0.9%	-4.6%	1.3%	1.4%	-0.5%	1.5%	2.3%	1.6%	1.5%	1.9%	2.3%	1.2%	0.3%	0.2%	2.1%	0.9%	-5.6%	1.5%	0.7%	-0.9%	-2.6%	4.1%	3.1%	1.7%	4.4%	2.3%	1.7%	-0.6%	1.0%				
BDCs (BIDZ)	5.7%	6.5%	-1.5%	-0.8%	4.3%	1.3%	-2.3%	5.1%	12.8%	10.5%	-3.1%	-32.4%	7.5%	10.6%	-1.8%	-29.4%	1.3%	1.7%	-2.5%	5.4%	6.6%	2.4%	2.3%	8.8%	8.7%	3.8%	-0.5%	4.1%	-3.6%	9.7%	4.3%	-20.2%	2.7%	2.0%	-5.2%	-5.9%	13.9%	8.5%	4.2%	10.3%	7.9%	5.4%	-6.0%	2.9%				
Pfereeds (PFF)	1.8%	3.0%	-0.5%	-0.9%	1.5%	1.6%	-0.1%	1.5%	3.5%	4.2%	-1.2%	-14.8%	2.8%	3.3%	0.6%	-1.1%	0.9%	2.0%	-1.8%	2.2%	1.3%	0.6%	1.3%	0.6%	1.7%	3.7%	3.4%	0.4%	1.3%	0.6%	1.5%	0.0%	-2.0%	-0.5%	3.4%	4.7%	0.7%	1.7%	5.7%	0.9%	-1.9%	0.6%	0.8%					
IG Credit (LQD)	1.9%	0.6%	0.2%	1.2%	1.7%	0.0%	0.8%	2.7%	3.0%	1.2%	-0.9%	-1.1%	2.4%	1.1%	0.3%	1.8%	1.8%	0.6%	0.3%	3.5%	1.1%	0.0%	0.1%	2.6%	1.4%	0.9%	0.4%	2.6%	1.3%	-0.1%	0.2%	-1.1%	1.7%	1.4%	-0.2%	3.3%	2.9%	1.2%	1.5%	2.7%	1.5%	1.3%	0.9%	1.1%				
HY Credit (HYG)	3.1%	2.0%	0.1%	2.5%	1.2%	0.8%	1.3%	3.2%	5.2%	2.3%	-2.4%	-8.5%	3.6%	3.2%	1.3%	-3.7%	2.8%	1.4%	-1.3%	1.5%	2.7%	1.0%	0.8%	5.3%	3.0%	3.4																						

# Model Portfolios (Illustrative Excerpts)

## Capital Allocation@Hedgeye --- Dual-Constraint Model Portfolios

Constraints = <5% Probabilities of (a) Drawdown Exceeding Specified % or (b) Turnover >40% in Any Rolling 18-Month Interval

		-15% Drawdown	-25% Drawdown	-35% Drawdown	Long-Term Return Prospect through 1Q25	Signals						
						Above = Last Price Exceeds Level Below = Level Exceeds Last Price						
Inception:		5/9/2024	5/9/2024	5/9/2024		Closing Price as of 5/20/2024	Price v Trend	Trend	Current Status	Price v Tail	Tail	Current Status
Weights last revised:		5/9/2024	5/9/2024	5/9/2024								
Return since inception as of:	5/20/2024	1.2%	1.6%	2.3%								
<b>Currencies &amp; Cash Equivalents</b>		<b>33%</b>	<b>14%</b>	<b>7%</b>								
Cash Equivalents	BIL	3%	2%	1%	N/A			N/A			N/A	
Invesco DB US Dollar Index Bullish Fund	UUP	15%			Positive	\$ 28.60	1.74%	28.11	Above	3.32%	27.68	Above
Invesco CurrencyShares Euro Trust	FXE				Indeterminate	\$ 100.30	0.90%	99.41	Above	1.41%	98.91	Above
Invesco CurrencyShares Japanese Yen Trust	FXJ				Indeterminate	\$ 59.24	-4.42%	61.98	Below	-7.10%	63.77	Below
Invesco CurrencyShares Swiss Franc Trust	FXF				Indeterminate	\$ 97.70	-2.06%	99.76	Below	-2.08%	99.78	Below
Invesco CurrencyShares British Pound Sterling Trust	FXB				Positive	\$ 122.30	1.07%	121.00	Above	1.92%	120.00	Above
SPDR Gold Shares	GLD	15%	12%	6%	Positive	\$ 224.56	12.84%	199.00	Above	16.96%	192.00	Above
<b>Commodities</b>		<b>12%</b>	<b>14%</b>	<b>27%</b>								
iShares S&P GSCI Commodity Indexed Trust	GSG	4%	6%	12%	Positive	\$ 22.52	4.65%	21.52	Above	6.58%	21.13	Above
United States Oil Fund LP	USO				Indeterminate	\$ 76.73	1.39%	75.68	Above	5.17%	72.96	Above
United States Natural Gas Fund LP	UNG				Indeterminate	\$ 19.82	15.57%	17.15	Above	-23.09%	25.77	Below
Invesco DB Agriculture Fund	DBA	3%	3%		Positive	\$ 23.74	0.17%	23.70	Above	8.30%	21.92	Above
Invesco DB Base Metals Fund	DBB	3%	3%	5%	Positive	\$ 21.63	17.36%	18.43	Above	20.37%	17.97	Above
iShares Silver Trust	SLV				Indeterminate	\$ 28.98	26.00%	23.00	Above	32.69%	21.84	Above
Global X Uranium ETF	URA	2%	2%	5%	Positive	\$ 33.21	16.61%	28.48	Above	28.17%	25.91	Above
VanEck Rare Earth and Strategic Metals ETF	REMX			5%	Indeterminate	\$ 56.44	7.00%	52.75	Above	-8.85%	61.92	Below
ProShares Bitcoin Strategy ETF	BITO				Indeterminate	\$ 28.47	11.69%	25.49	Above	40.73%	20.23	Above
Grayscale Ethereum Trust (ETH)	ETHE				Indeterminate	\$ 28.71	19.48%	24.03	Above	55.44%	18.47	Above
<b>Bonds &amp; Preferred Stocks</b>		<b>27%</b>	<b>25%</b>	<b>11%</b>								
iShares Core U.S. Aggregate Bond ETF	AGG				Indeterminate	\$ 96.68	0.21%	96.48	Above	0.83%	95.88	Above
iShares 1-3 Year Treasury Bond ETF	SHY	7%	3%		Positive	\$ 81.40	0.25%	81.20	Above	1.17%	80.46	Above
iShares 7-10 Year Treasury Bond ETF	IEF				Indeterminate	\$ 92.97	-0.47%	93.41	Below	-0.18%	93.14	Below
iShares 20+ Year Treasury Bond ETF	TLT				Indeterminate	\$ 91.12	-3.06%	94.00	Below	-0.93%	91.98	Below
iShares iBoxx \$ High Yield Corporate Bond ETF	HYG				Indeterminate	\$ 77.32	1.03%	76.53	Above	4.30%	74.13	Above
iShares Preferred & Income Securities ETF	PFF				Indeterminate	\$ 31.66	0.73%	31.43	Above	3.84%	30.49	Above
iShares TIPS Bond ETF	TIP	8%	6%		Positive	\$ 106.54	0.51%	106.00	Above	0.51%	106.00	Above
Vanguard Total International Bond ETF	BNDX	8%	8%	7%	Positive	\$ 48.69	0.04%	48.67	Above	1.65%	47.90	Above
SPDR FTSE International Government Inflation-Protected Bond ETF	WIP			4%	Positive	\$ 39.71	0.48%	39.52	Above	0.61%	39.47	Above
iShares JP Morgan USD Emerging Markets Bond ETF	EMB	4%	8%		Positive	\$ 89.42	1.58%	88.03	Above	5.21%	84.99	Above



## Old Game, New Rules, New Players

### What Are “Flows”?



*In the stock market, Capital Flows, or simply “Flows”, describe the journey of money as it is invested into, or pulled out of, different stocks or sectors.*

**Discretionary flows** involve investment decisions that are based on the judgment and discretion of an individual or a portfolio manager. These flows are driven by qualitative factors, market analysis, and personal assessments of investment opportunities. **Discretionary flows are human-driven, emotional and are generally unpredictable.**

**Systematic flows** refer to investment decisions that are made based on a predefined strategy or a set of rules. At the institutional level, these strategies are almost exclusively executed through complex computer algorithms driven by quantitative factors meant to manage risk and generate alpha. **Systematic flows are mechanical, unemotional, and predictable.**



In 1996, IBM's supercomputer "Deep Blue" makes chess history by beating Garry Kasparov, the world's best chess player

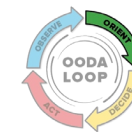
*Due to their inherent predictability, our research primarily focuses on Systematic Flows.*

#### Key Takeaways

- We published select materials from our research partners at Tier1Alpha (T1A) at pages 14-16 of [Issue 2](#) of Observatory and are doing something similar here to highlight an increasingly worrisome aspect of contemporary capital markets: what our friends at T1A refer to as “flow-driven” trading.
- Why should thoughtful allocators of the sort we're privileged to be serving via **Capital Allocation** fret about such trading? They shouldn't, unless their own investment processes impel them to adjust their holdings in a price-insensitive manner, whether episodically or—like many flow-driven traders—routinely.
- We'll explore the concerns raised above in greater detail in our 11/8 webcast and future written reports. Meantime, we encourage readers to study the T1A materials furnished here, which we present without “side comments” like those you're now reading.



# Identifying Investment-Related Ends & Means



## For Individuals & Families

### Aspirational Goals

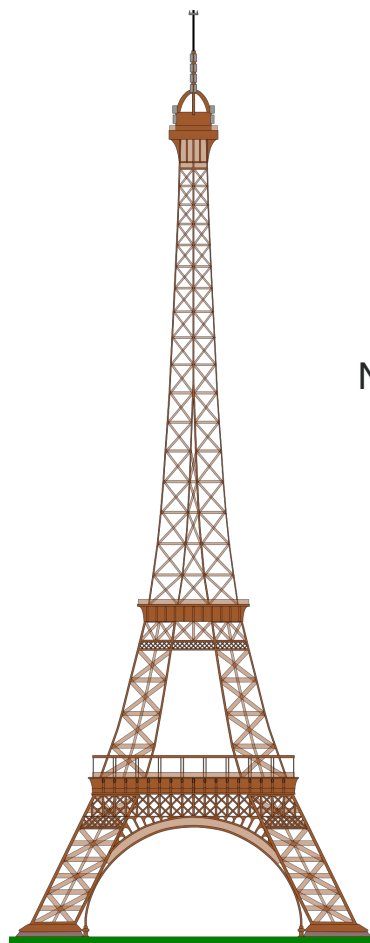
Concentrated Equities inc. Options  
Non-Core Investment Realty  
Human Capital  
Cash Reserves

### Important Goals

Core Equities inc. Private  
Core Investment Realty  
Core Fixed Income  
Active Strategies  
Cash Reserves

### Essential Goals

Base Salary and Benefits  
Pension Income & Assets  
Life and Disability Insurance  
Owner-Occupied Realty  
Cash Reserves



## For Endowed Charities

### Build and Nurture New Programs

Aggressive Active Strategies  
Seed & Early-Stage VC  
Cash Reserves

### Enhance Existing Programs

Non-Core Marketable Stocks & Bonds  
Private Equity inc. Late-Stage VC  
Non-Core Realty  
Cash Reserves

### Maintain Existing Programs

Core Marketable Stocks & Bonds  
Commodities and Currencies  
Core Realty  
Cash Reserves

## Comments

The framework at far left has been adapted from Ashvin Chhabra's seminal treatise on investment policy: *The Aspirational Investor: Taming the Markets to Achieve Your Life's Goals* (2015). Typically applied by and on behalf of individuals and families, this framework has been adapted for potential institutional use via the variant at the immediate left.

All credit to Ashvin for his creativity—and his dogged determination in lobbying asset owners of all types and stripes to devote due and hence substantial time and attention to investment policy-making in general and goal setting in particular.

# Investment Policy Statements (IPSs)

## Potentially Lethal Attributes

- Policy allocations to contractual arrangements or marketing schemes masquerading as asset classes, e.g., “Hedge Funds”.
- Policy frameworks comprising fund segments whose constituent parts embody vastly different return drivers and risks, e.g., “Alternative Investments”.

## Unfavorable Attributes

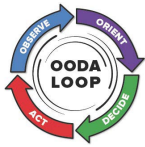
- Non-zero policy allocations to sub-classes or strategies employed for total return as distinct from hedging purposes, e.g., venture capital.
- Total portfolio benchmarks comprising inherently uninvestible components, e.g., mean or median returns for a designated universe of PE or VC managers or funds.
- Operating procedures, governance protocols and other provisions whose inclusion in IPSs renders them unmanageably prolix and whose codification is best achieved via separate organizing documents.

## Helpful Attributes

- Clear and concise statements of the purpose(s) that asset classes or sub-classes seek to serve, with each such segment sorted ideally into one of two mutually exclusive categories based on its primary purpose: (1) total return **or** (2) hedging.

## Essential Attributes

- Codification of the types of risk that **must** be incurred to achieve the ultimate owner’s financial objectives, including (1) tolerable maxima for such risks (e.g., drawdowns exceeding a given percentage shall be avoided at all costs) and (2) actionable guidelines respecting the only form of risk all investors bear to a greater or lesser extent: liquidity risk.
- Return goals consistent with agreed-upon risk parameters—**rank ordered** to facilitate sound decision-making when such goals’ simultaneous pursuit becomes infeasible, with **time horizons** specified for each.



# Deceptively Seismic Shifts In Financial Terrain

## Mid-1980s – Present plus **Potential Future Shifts**

- Plan Asset Regulations enable pensions funds to pile into VC & realty 1986
- Regulation FD outlaws selective disclosures by public companies 2000
- Pension Protection Act & related regs turbocharge indexed and age-based strategies \* 2007
- FASB relaxation of fair-value rules reverses death spiral of loss-plagued banks 2009
- Fed lifts ceiling on government insurance of bank deposits via creation of BTFP 2023
- Fidelity launches Digital Asset Accounts to facilitate 401(k) investments in crypto 2024
- **DoL adoption of “Fiduciary Rule” cements dominance of Active by “Passive” 2024?**
- **U.S. government restricts (bans?) Americans’ investment in Chinese companies 2024?**
- **Basel III Endgame capital requirements turbocharge banks’ absorption of USTs 2025?**

\* PPA enactment in 2006; “Final Regulations” in 2007; Department of Labor “Tips” in 2013 plus subsequent DoL pronouncements.

# The Yale Model vs. Wannabes

<b>Green = virtue</b> <b>Red = defect</b>	The Yale Model As Employed by Swensen <i>et al</i>	The Endowment Model a/k/a Yale Wannabes
<b>LIFE SPAN</b> Birth Death Declared dead	Late 1980s Immortal? Never?	Early 2000s Mid-2010s Not soon enough
<b>KEY CHARACTERISTICS</b> Initial user(s) Initial champion(s) Dominant mindset #1 prerequisite for success #2 prerequisite for success Transparency Complexity	Yale Swensen Prophet <b>Risk being wrong and alone</b> <b>CIO-centric management</b> Medium <b>Medium</b>	Large endowments Consultants Acolyte Tolerance for illiquidity <b>Steady cash inflows</b> <b>Very low</b> <b>Very high</b>
<b>GOALS (actual even if unstated)</b> Primary Secondary	5+% real returns Beat Harvard and Princeton	<b>Keep pace with peer investors</b> <b>10+% annualized returns</b>
<b>TYPICAL PORTFOLIO</b> Asset classes Pseudo-asset classes Average allocations Marketable managers Private investment managers Publicly owned managers Liquidity <3 years <3 years Potentially indefinite holds	Several <b>Few if any</b> >5% >3% <b>Few if any</b> <60% >40% <b>Rare</b>	Several <b>Many</b> <b>&lt;3%</b> <b>&lt;1%</b> <b>Why not?</b> <60% >40% <b>Very rare</b>
<b>COSTS</b> Shared scale economies Annualized base expenses Realization-based incentives Client-oriented hurdle rates	Some <b>Optimized</b> <b>Common</b> <b>Some</b>	Very rare <b>High</b> <b>Common</b> <b>Very rare</b>

# Standing on the Shoulders of Giants (?!)

## Thoughts Served Up on The Macro Show - 6 July 2023



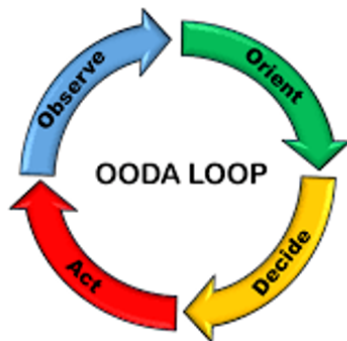
### OODA-Based Analysis of Japan's Prospects

- Convergence of micro trends within Japan
  - Intergenerational management transfers
  - Unwinding of cross holdings
  - Rising returns on and of capital
  - Value-driven capital allocation
- Emergence of Japan's overlooked macro strengths
  - Political stability (notwithstanding three PMs within the last five years)
  - Unwavering commitment to liberal democratic principles
  - Strong social cohesion under stress
  - Preference for actual engineering over financial engineering
  - Regional leader on security and trade issues
  - Global leader in accumulation of net external assets (#1 for 32 straight years)

*Psst: by careful design, there was nary any mention in our July deck of Berkshire's investments in Japanese trading companies, which had already appreciated materially since their inception in 2020 and are trading today at ~1.6x their cost in US dollar terms including post-2020 purchases.*

# Case Study in Capital Allocation: Chinese Stocks

## Observe



- Troubling internal trends
  - Sclerotic transition to consumption-driven economic model rooted in stagnating income growth and sagging consumer confidence
  - Conspicuous and politically vexatious income and wealth inequality
  - Ongoing environmental degradation
  - Aging population with rising healthcare and pension cost challenges
  - Large and growing cohort of under- and unemployed youth
  - Large gender imbalance spawned by misguided one-child policy
  - Ballooning local government debts and rampant expansion of local government financing vehicles (LFGVs)
  - Ongoing incapacity of Chinese banks to channel credit to consumers
- Troubling macroeconomic and geopolitical trends
  - Follower status respecting key technologies including chip design
  - Increasingly challenged by G-7 on security and trade issues
  - Increasingly threatened by reshoring and near-shoring and associated decline in exports (absolute and relative to GDP)

# Key To-Do's

- 1** Continuously Updated *Dashboards*
- 2** Customizable Portfolio Management Templates
- 3** Crown Jewels

# Thank You! Have Your Friends & Colleagues Check Out Hedgeye


HEDGEYE


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PM at Carlyle-Blue Wave Partners, Magnetar Capital, Falconhenge Partners, and Dawson-Herman Capital Management.

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20+ years experience. While at Morgan Stanley he was ranked #1 by Institutional Investor (Restaurants). Howard has covered Tobacco, Alcohol, Food, and Beverage companies for nearly two decades.

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Head of Healthcare Investments at Dawson-Herman Capital Management, joined after working as an analyst at W.P.Stewart.


 **MACRO, FINANCIALS, HOUSING, PAYMENTS, CRYPTO | JOSH STEINER** [@HEDGEYEFIG](#)  
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Covers U.S. Macro, Crypto & Housing. Owned Integrated Performance, LLC, A Human Performance Consultation Company

 **COMMUNICATIONS | ANDREW FREEDMAN** [@HEDGEYECOMM](#)  
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 **SOFTWARE | ANDREW FREEDMAN, FELIX WANG** [@HEDGEYESOFTWARE](#)  
Andrew & Felix, analysts with over a decade of experience each, have teamed up with software analyst Nick Balch to provide differentiated & data-oriented Technology sector idea generation.

 **GLOBAL TECHNOLOGY | FELIX WANG** [@HEDGEYETECH](#)  
15 years of experience covering TMT/consumer. Coverage includes consumer tech/China, semis, hardware & AI. Featured on Bloomberg, Sina Finance, Sohu, Barron's and Fast Money

 **ENERGY | FERNANDO VALLE** [@HEDGEYEENERGY](#)  
Over 14 years of Energy investment research experience at Citi and Bloomberg. Employing a well-to-wheel framework to capture movements in the Energy cycle.

 **DEMOGRAPHY | NEIL HOWE** [@HOWEGENERATION](#)  
Renowned authority on generations and social change in America. Neil is an acclaimed bestselling author and speaker.

 **MACRO POLICY | JT TAYLOR** [@HEDGEYEDC](#)  
Former Managing Partner of Kemp Partners in Washington, DC and led the policy research team at Pelorus Research in London.

 **REITS | ROB SIMONE** [@HEDGEYEREITS](#)  
Ranked II REIT team at Evercore ISI, most recently Dir. of Bus. Development at Paramount Group (NYSE: PGRE) a New York-based office REIT

 **TELECOM & MEDIA POLICY | PAUL GLENCHUR** [@HEDGEYETECHLAW](#)  
Leading telecommunications policy specialist with a combined legal and industry background. Former attorney for the FCC. Member of the American Bar Association Section on Antitrust Law.

 **HEALTH POLICY | EMILY EVANS** [@HEDGEYEEEVANS](#)  
Worked at JC Bradford helping to bring securities to market for healthcare related projects.

 **CAPITAL ALLOCATION | DAVID SALEM** [@DSALEMINVESTOR](#)  
Founding CEO & CIO of The Investment Fund for Foundations (TIFF) and Partner at GMO. Harvard JD/MBA.



## David Salem Capsule Bio

Prior to joining Hedgeye in early 2023 as its inaugural Managing Director of **Capital Allocation**, David served as founding President and Chief Investment Officer of The Investment Fund for Foundations (TIFF) and as a partner at GMO, working closely with Jeremy Grantham on investment solutions for large institutional funds.

David received a JD *cum laude* from Harvard Law School and an MBA with high distinction from Harvard Business School, where he was elected a Baker Scholar. A member of the District of Columbia Bar since earning his JD, David has held adjunct faculty positions at Middlebury College, from which he earned his undergraduate degree *summa cum laude*, and the University of Virginia, and served in the White House Counsel's office while enrolled at Harvard.

David's speaking schedule has included talks at numerous colleges and universities, including Dartmouth, Duke, Harvard, MIT, Middlebury, Northwestern, and Oxford, and at conferences organized by the Association of Governing Boards, the CFA Institute, the Council on Foundations, the Foundation Financial Officers Group, the London Business School and NACUBO among other organizations.

David's extensive volunteer labors have included service as a trustee of Middlebury College, the Center for Effective Philanthropy, the Initiative for a Competitive Inner City and the Core Knowledge Foundation, and as a 15+ year member of the investment committee of The Atlantic Philanthropies.

David and his wife Amory Rowe Salem ([linkedin.com/in/amoryrowesalem](https://www.linkedin.com/in/amoryrowesalem)) and their children reside in Cambridge, MA, which serves as home base for Amory's work as a sports journalist and Head Coach of girls lacrosse at the city's public high school, Cambridge Rindge and Latin.

# Legal

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