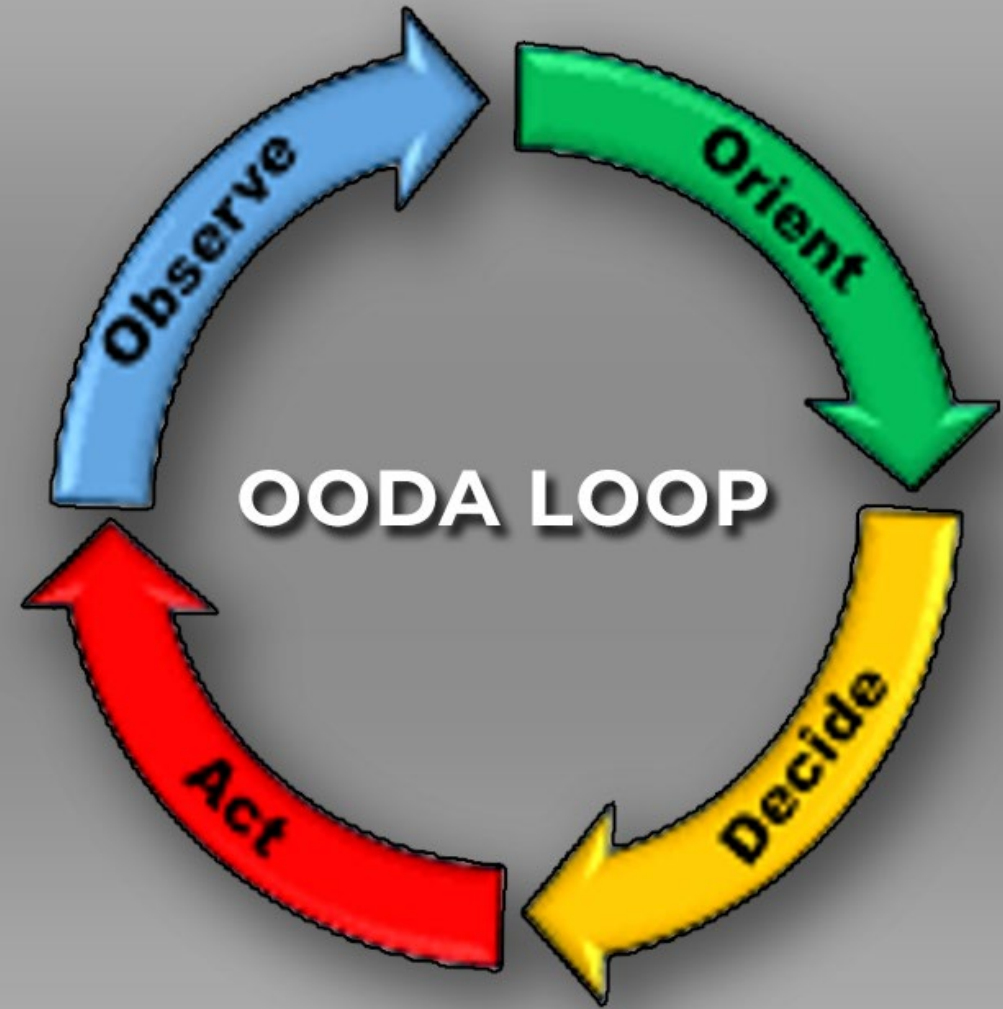


HEDGEYE



Capital Allocation

A New Institutional
Service from Hedgeye



David Salem
Managing Director

Intro to Capital Allocation

[1] Origins & Aims

- Napoleonic imperative
- Research provider selection criteria

[2] Elements & Service Tiers

- Delivered proactively at 5:00 pm ET on Thursdays = *CIO Corner*
- On demand = Macro Pro (all subscribers); sector research & consults (Tiers 1 & 2)

[3] Curated Q & A

Words To Live By

- 1** *If I have seen further it is by standing on the shoulders of giants.*
Isaac Newton (1643-1727)
- 2** *It is not the strongest of the species that survive, nor the most intelligent, but the ones most responsive to change.*
Charles Darwin (1809 – 1882)
- 3** *When the student is ready the master will appear.*
Lao Tzu (~6th century B.C.)
- 4** *Diversification is the only rational deployment of our ignorance.*
Peter Bernstein (1919 – 2009)
- 5** *I loved the competition. But I never had any fun. I never enjoyed it. All hard work all the time.*
Carl Yazstremski (born 1939)

Criteria for Primary Investment Research Provider

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

Go Anywhere, Stay As Long As Conditions Warrant

ETF Pro Positions Maintained for Three Months or More

Long
Short

Hedgeye Positions	Ticker	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23
Bonds																				
iShares 1-3 Year Treasury Bond ETF	SHY	Long	Long	Long	Long	Long	Long	Long	Long	Long										
iShares 7-10 Year Treasury Bond ETF	IEF																			Long
iShares 20+ Year Treasury Bond ETF	TLT	Long	Long	Long	Long	Long	Long	Long	Long	Long	Short	Short				Long				
iShares iBoxx \$ High Yield Corporate Bond ETF	HYG											Long				Short	Short	Short	Short	Short
Commodities																				
ProShares Bitcoin Strategy ETF	BITO																			Short
Currencies																				
Invesco CurrencyShares Euro Trust	FXE	Short	Short																Short	
Invesco DB US Dollar Index Bullish Fund	UUP	Long							Short	Short	Short	Short	Short	Short	Long	Long	Long	Long	Long	Long
SPDR Gold Shares	GLD		Long	Long	Long	Long	Long	Long	Long	Long	Short	Short			Long	Long			Long	Long
Non-US Stocks																				
iShares MSCI Japan ETF	EWJ									Long	Long									
iShares JPX-Nikkei 400 ETF	JPXN																			
iShares China Large-Cap ETF	FXI											Short	Short	Short						
iShares MSCI France ETF	EWQ	Short	Short																	
iShares MSCI Germany ETF	EWG											Long	Long							
iShares MSCI Hong Kong ETF	EWH												Short	Short						
iShares MSCI India ETF	INDA																			
US Stocks																				
iShares Russell 2000 ETF	IWM		Short	Short	Short	Short	Short	Short	Short								Short	Short	Short	Short
Invesco QQQ Trust Series 1	QQQ																Short	Short	Short	Short
Consumer Staples Select Sector SPDR Fund	XLP	Long				Short	Long													
Energy Select Sector SPDR Fund	XLE					Long					Long	Long	Long	Long						
SPDR S&P Oil & Gas Exploration & Production ETF	XOP																		Short	Short
Real Estate Select Sector SPDR Fund	XLRE								Long	Long			Long	Long						
Industrial Select Sector SPDR Fund	XLI	Short	Short				Short	Short												Short
iShares U.S. Home Construction ETF	ITB		Long																	
Utilities Select Sector SPDR Fund	XLU	Long	Long	Long	Long	Long	Long		Long	Long	Short	Short				Long				
iShares U.S. Aerospace & Defense ETF	ITA																			Long
Technology Select Sector SPDR Fund	XLK	Short	Short										Long	Long	Short	Short	Short	Short	Short	Short

Dynamic Asset Allocation Gets A Bad Rap

Fact: S&P 500 “Buy-and-Hold” Total Return Since Inception in 1926 = 226x

Fact: Remove 10 **Best** Days (Out of ~24,000!) = 75x

Fact: Reinsert 10 **Best** Days But Remove 10 **Worst** = 741x

Question: How many of the 10 **Worst** Days occurred during bear markets? Answer = 10

Question: How many of the 10 **Best** Days occurred during bear markets? Answer = 10

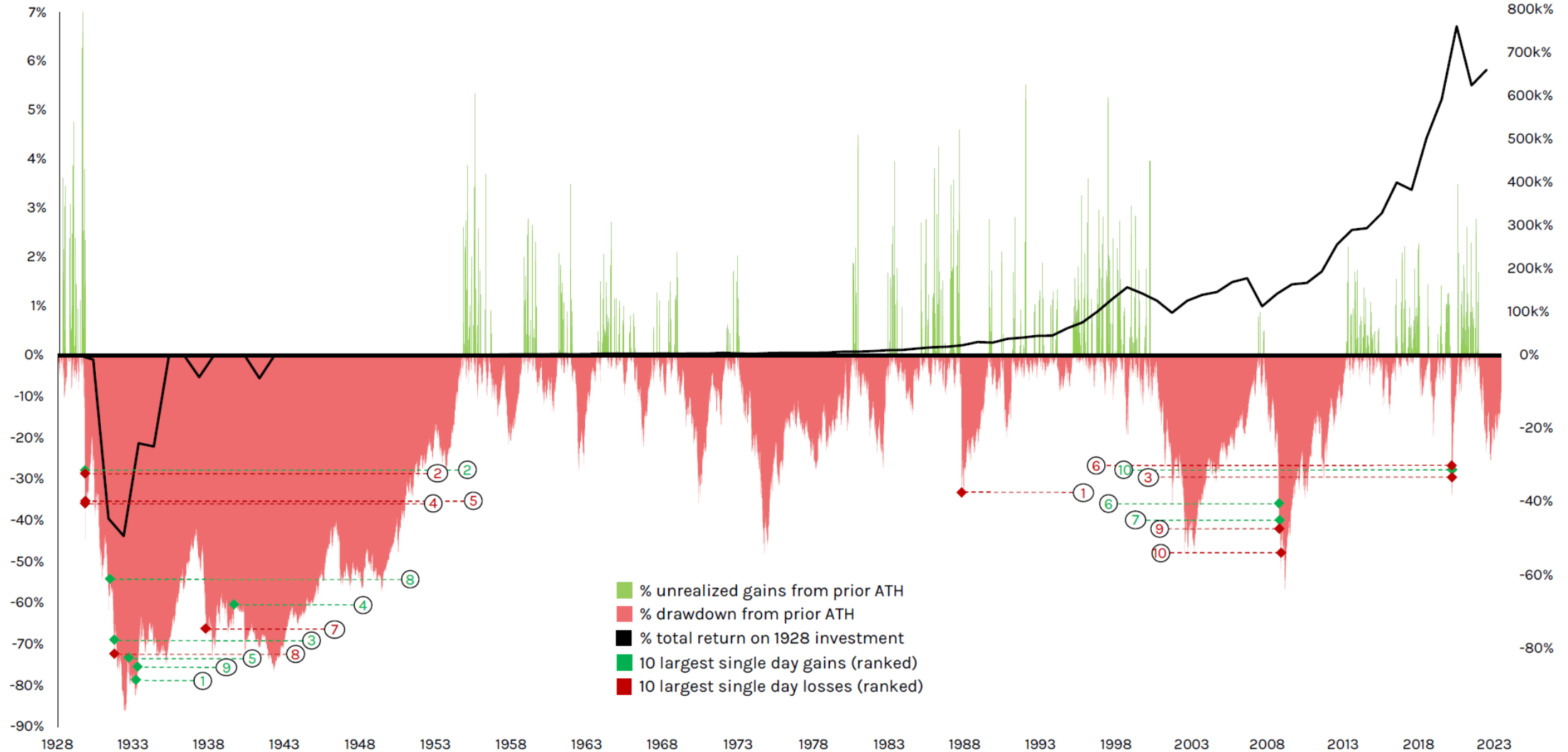
Fact: Total Return Since 1926 excluding **Both** 10 **Worst** and 10 **Best** Days 245x

Fact: 245x > 226x (i.e., perfect timing isn’t needed to trump buy-and-hold)

* Bear markets defined as epochs during which the S&P 500 fell at least 20% below its then all-time high without regaining it.

Dynamic Asset Allocation Gets A Bad Rap (cont.)

US Stocks' Manic-Depressive Tendencies
S&P 500 Return Data Jan 1928 - June 2023



Elements of Capital Allocation @Hedgeye

Black = provided to all CA subscribers

Green = provided to Tier 1 and Tier 2 subscribers only

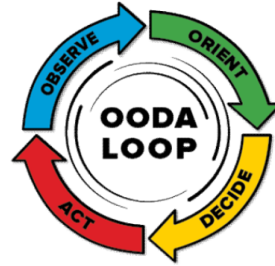
Purple = provided to Tier 1 subscribers only

What	When	Wherefore
Risk Range™ Signals	Daily	Trade ranges & Trend characterizations 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
ETF Pro Plus	Weekly	ETF-specific recommendations based on Hedgeye research
Investing Ideas	Weekly	Stock-specific recommendations based on Hedgeye research
CIO Corner	Weekly	Notable opportunities & perils in markets with commentary
Macro Themes	8x year	Comprehensive analyses of economic and market conditions
Demography	Varied	Commentaries on notable demographic trends
Access to CA Forum	Varied	Controlled access discussion board described later in this memo
Consult CA Team	Varied	One 60-minute consult per quarter
Consult CA Team	Varied	Two additional 60-minute consults per quarter
Consult Other Sector Teams *	Varied	Three 45-minute consults per quarter
Sector-Specific Black Books *	Varied	Three such books of a subscriber's choosing per quarter

* In addition to CA, Hedgeye employs teams generating research on multiple economic and capital market sectors, including China-based companies; Consumer Staples; Communications; Financials; Gaming, Lodging & Leisure (GLL); Healthcare; Industrials; Retail; Real Estate (a/k/a REITs) and Technology. Hedgeye specialists also generate robust and regularly recurring research on trends in demography; healthcare policies; and US federal budget, defense, legal and regulatory policies.

Preliminary Game Plan for CIO Corner

When	What	Whys and Wherefores	Pages
Week 1	Observe	Data of perceived cardinal importance to allocators as a group	24
	Orient	Return prospects for multiple exposures over next 9+ months	6
	Decide	ETF Pro Positions Held for Three or More Months	1
	Act	Changes in exposure appraisals furnished in Orient	1
	Coming Attractions	Upcoming Hedgeye events and enhancements to Hedgeye services	1
		Typical number of pages in Week 1 editions =	32
Weeks 2 - 4	Best Practices	Policies, strategies or tactics used successfully by savvy allocators	2
	Canaries in Coal Mines Come Again?	Data suggesting potential inflections in economic or market trends Notably suspect assertions by prominent players in capital markets	1
	Coming Attractions	Upcoming events and enhancements to Hedgeye services	1
	First Principles	Suggested measures for getting structured for investment success	1
	Great Contemporaries	Profiles of laudable investment pros plying their trade full-time	1
	Good, Bad and Ugly	Critiques of varying approaches to investment policy-making	2
	Good Question!	Answers to notably insightful questions raised by CA subscribers	1
	ICYMI	Worthwhile papers on topics of interest to allocators	1
	Mistakes to Avoid	Mistakes allocators should take care to avoid	2
	Profiles in Courage	Intrepid words or deeds that spawned investment wins	1
	Revisionist History	Notable revisions to publicly reported macro data	1
	Startling Stats	Arrestingly interesting data appearing in other Hedgeye products	1
	This Just In	Updates to prior (and especially recent) editions of Observe	2
	Well Put!	Notably thoughtful posts by patrons to CA Forum	1
	Who Knew?	Notable facts or phenomena surfaced by CA staff or patrons	1
		Typical number of pages in Week 2 - 4 editions =	12

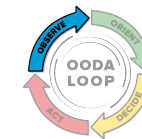


CIO Corner – Issue 6
August 2023

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Highlighted sections are those on which acutely time-pressed allocators might usefully focus, starting (and ending as needed in light of time constraints!) with **Noteworthy Opportunities & Perils**.

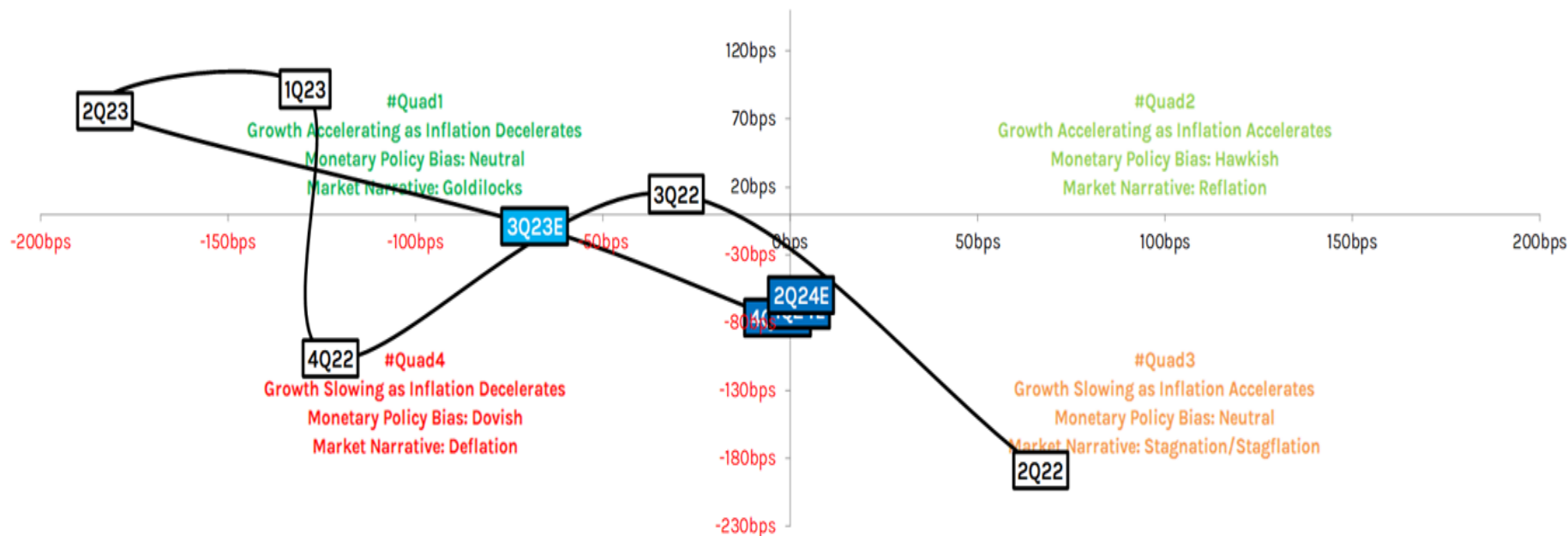
U.S. Quad Projections as of August 2023



United States	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	← Actuals Estimates →	3Q23E	4Q23E	1Q24E	2Q24E
Real GDP QoQ SAAR	35.30%	3.90%	6.30%	7.00%	2.70%	7.00%	-1.60%	-0.60%	3.20%	2.60%	2.00%	2.40%	Real GDP QoQ SAAR	2.87%	-0.46%	-0.79%	0.02%
Real GDP YoY	-2.02%	-1.52%	1.19%	12.46%	4.96%	5.72%	3.68%	1.80%	1.94%	0.88%	1.80%	2.56%	Real GDP YoY	2.47%	1.70%	1.00%	0.40%
2yr Comparative Base Effects	2.73%	2.44%	1.49%	-3.11%	0.14%	0.53%	1.01%	2.06%	1.47%	2.10%	2.44%	2.13%	2yr Comparative Base Effects	3.45%	3.30%	2.74%	2.18%
Headline CPI YoY	1.22%	1.24%	1.90%	4.85%	5.34%	6.69%	7.96%	8.63%	8.33%	7.10%	5.81%	3.98%	Headline CPI YoY	3.30%	3.27%	3.29%	3.32%
2yr Comparative Base Effects	2.20%	2.12%	1.88%	1.09%	1.49%	1.64%	2.01%	2.61%	3.28%	3.96%	4.93%	6.74%	2yr Comparative Base Effects	6.83%	6.90%	6.89%	6.31%

United States

↔ x-axis: First Difference of YoY Headline CPI;
 y-axis: First Difference of YoY Real GDP



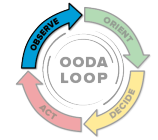
Data Source: BEA, BLS Light Blue box = Hedgeye Nowcast Model estimate. Dark Blue boxes = Hedgeye Comparative Base Effects Model estimates.

Comments

What changed when Hedgeye's Macro team updated the Quad projections furnished in Issue 1 to reflect fresh data fed into Hedgeye's Nowcast model for the US? Not much: 3Q23 shifted from a shallow Quad 1 (<25 bp from the vertical axis) to a shallow Quad 4; 4Q23 and 1Q24 stayed in their pre-existing Quads (4 and 3, respectively); and 2Q24 entered stage right with an initial Quad 3 projection.

By our lights, the key takeaway for allocators pondering whether and how to adjust portfolio positions to optimize risk-adjusted expected returns between now and the end of the projection period examined at left is this: beware exposures that typically generate positive absolute returns under **either** Quad 3 **or** Quad 4 conditions **but not both**. Alas, as noted in *Return Tendencies by Quad* in the Appendix, the list of exposures clearing the bar just set is short, making abnormally large cash positions a prudent posture for the time being.

US Real GDP Nowcast Model



HEDGEYE US NOWCAST MODEL SUMMARY	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	1Q23	2Q23	Δ
Real PCE YoY (1)	7.87	7.64	6.60	7.05	7.43	7.01	5.55	6.67	2.27	2.37	2.60	2.13	2.16	2.30	2.11	1.69	-1.37	1.94	2.58	2.43	2.10	2.17	2.08	-	2.37	2.13	-0.24
Real Disposable Personal Income YoY (21)	-3.36	0.40	-1.39	-0.92	0.14	-0.34	-1.47	-3.43	21.60	-7.44	-4.78	-4.68	-4.56	-4.13	-2.62	-2.35	-1.96	-1.50	2.42	2.77	3.55	3.54	3.99	-	2.92	3.76	0.85
Personal Savings Rate % of DPI (17)	9.9	9.5	7.9	7.3	7.1	7.5	4.7	4.5	3.8	3.6	3.4	2.7	3.5	3.2	3.0	3.0	3.5	3.7	4.0	4.3	4.6	4.3	4.6	-	4.3	4.5	0.1
Headline Retail Sales YoY (4)	14.29	14.13	12.71	14.97	17.32	15.52	13.25	17.77	8.36	8.92	9.81	9.26	10.34	10.17	9.37	8.77	6.14	5.98	7.41	5.26	2.19	1.23	1.61	-	4.95	1.42	-3.54
Retail Sales Control Group YoY (8)	8.81	10.78	9.44	11.59	12.49	11.06	9.95	13.29	6.73	7.48	8.94	7.43	9.62	8.27	8.73	7.32	5.82	6.50	6.44	6.30	4.07	3.71	3.64	-	5.60	3.67	-1.93
Auto Sales YoY (11)	1.58	-14.02	-25.46	-19.86	-17.30	-23.54	-9.56	-10.21	-24.90	-22.80	-25.37	-15.36	-9.49	0.92	10.76	14.70	9.95	6.99	4.65	5.83	11.18	11.34	18.69	20.62	7.22	16.88	9.66
MBA Mortgage Purchase Index YoY (26)	-17.27	-17.56	-14.14	-11.03	-6.98	-9.26	-10.06	-8.21	-9.55	-11.42	-13.34	-12.60	-15.71	-20.36	-29.54	-39.98	-41.09	-39.77	-36.69	-38.03	-38.03	-32.55	-29.91	-29.22	-37.58	-30.56	7.02
Total Employees On Nonfarm Payrolls YoY (5)	5.39	4.56	4.25	4.27	4.50	5.10	4.99	5.20	4.92	4.88	4.79	4.54	4.38	4.15	4.00	3.67	3.43	3.20	3.27	2.81	2.67	2.64	2.60	2.49	2.92	2.58	-0.34
Aggregate Hours Worked YoY (3)	6.00	4.56	4.25	3.97	4.50	5.10	3.79	5.51	4.32	3.98	3.89	3.94	3.78	3.55	3.40	3.37	2.54	2.01	3.27	2.22	1.79	2.05	1.71	1.90	2.42	1.89	-0.54
Aggregate Labor Income YoY (7)	10.58	9.17	9.33	9.60	10.15	10.37	9.72	11.05	10.49	9.97	9.63	9.56	9.43	9.10	8.64	8.41	7.66	6.88	7.80	7.00	6.17	6.52	6.15	6.33	6.99	6.33	-0.66
Monthly Initial Jobless Claims YoY (16)	-7.36	-63.50	-63.63	-65.81	-67.41	-69.01	-65.18	-71.85	-71.23	-66.09	-57.65	-47.39	-40.72	-39.73	-43.77	-27.50	-11.62	-2.99	-15.62	-1.42	9.48	12.04	8.00	19.44	-2.52	13.16	15.68
Conference Board Consumer Confidence Index (15)	125.1	115.2	109.8	111.6	111.9	115.2	111.1	105.7	107.6	108.6	103.2	98.4	95.3	103.6	107.8	102.2	101.4	109.0	106.0	103.4	104.0	103.7	102.5	109.7	104.5	105.3	0.8
Industrial Production YoY (2)	5.38	4.42	3.36	4.02	4.48	2.97	2.27	6.61	4.43	4.59	3.66	3.19	3.01	3.11	4.51	3.10	1.85	0.59	1.47	0.81	0.17	0.37	0.23	-	0.82	0.30	-0.52
Capacity Utilization (19)	78.4	78.5	77.8	78.8	79.5	79.3	79.4	79.9	80.5	80.7	80.6	80.5	80.7	80.7	80.8	80.6	80.3	78.9	79.6	79.5	79.5	79.8	79.6	-	79.5	79.7	0.2
Durable Goods New Orders YoY (13)	15.83	17.01	12.54	11.61	13.42	14.10	11.52	10.03	9.07	10.63	9.33	9.51	8.89	6.31	8.28	8.03	3.11	5.31	1.91	0.61	4.09	4.33	5.48	-	2.20	4.91	2.70
Core Capital Goods New Orders YoY (14)	14.56	14.50	12.12	12.45	12.73	12.10	8.97	9.04	8.21	5.82	8.68	7.57	7.20	7.29	5.63	4.74	3.23	2.18	4.28	3.61	1.78	1.94	2.29	-	3.22	2.11	-1.11
Factory Orders YoY (10)	20.18	20.75	18.71	19.10	19.76	18.57	15.83	15.43	16.78	16.71	15.84	15.53	12.79	10.78	11.06	10.13	5.82	5.42	3.94	2.07	0.47	0.02	-0.98	-	2.16	-0.48	-2.64
Manufacturing & Trade Inventories YoY (28)	8.70	9.15	9.64	10.19	11.31	13.48	14.33	15.43	17.85	18.98	19.84	20.47	19.62	19.43	18.26	16.81	15.13	12.57	10.69	8.78	6.18	5.23	-	-	8.55	5.23	-3.32
Nonresidential Construction Spending YoY (30)	-1.10	0.59	0.05	0.67	3.05	3.02	3.00	6.00	5.38	8.13	7.45	8.34	10.42	10.22	11.64	11.42	11.99	13.25	16.30	17.03	17.28	16.76	17.31	-	16.87	17.03	0.16
Residential Construction Spending YoY (28)	31.74	26.46	23.32	20.85	21.05	21.28	21.69	25.08	24.89	25.61	24.09	20.40	15.09	11.46	8.68	5.79	1.40	-3.14	-6.15	-8.97	-10.65	-12.90	-11.38	-	-8.59	-12.14	-3.55
ISM Manufacturing PMI (27)	60.0	59.6	60.7	60.4	60.8	58.6	57.6	58.4	57.0	55.9	56.1	53.1	52.7	52.9	51.0	50.0	49.0	48.4	47.4	47.7	46.3	47.1	46.9	46.0	47.1	46.7	-0.5
ISM Non-Manufacturing PMI (18)	64.0	61.7	62.1	66.6	67.6	61.7	60.4	57.2	58.4	57.5	56.4	56.0	56.4	56.1	55.9	54.5	55.5	49.2	55.2	55.1	51.2	51.9	50.3	53.9	53.8	52.0	-1.8
NFIB Small Business Optimism Index (24)	99.7	100.1	99.1	98.2	98.4	98.9	97.1	95.7	93.2	93.2	93.1	89.5	89.9	91.8	92.1	91.3	91.9	89.8	90.3	90.9	90.1	89.0	89.4	-	90.4	89.2	-1.2
Exports YoY (6)	25.01	23.15	17.19	22.47	21.47	20.14	15.97	20.50	18.21	22.05	21.63	21.85	21.16	20.78	21.99	12.49	10.01	6.69	12.30	7.97	5.09	-1.43	-3.15	-	8.45	-2.29	-10.74
Imports YoY (9)	22.85	21.13	20.77	19.25	21.92	22.65	21.41	23.88	27.19	24.10	22.84	19.93	16.82	14.05	14.42	13.36	2.40	2.04	3.80	0.62	-6.45	-4.48	-6.82	-	-1.35	-5.65	-4.31
Rail Traffic YoY (12)	6.26	-0.06	-2.20	-2.34	-4.43	-6.38	-4.85	6.59	-2.27	-4.35	-3.90	-3.22	-3.15	-2.18	-2.78	-2.68	-4.31	-6.91	-5.99	-7.72	-8.84	-8.60	-7.55	-5.94	-7.85	-7.36	0.49
Headline CPI YoY (23)	5.37	5.25	5.39	6.22	6.81	7.04	7.48	7.87	8.54	8.26	8.58	9.06	8.52	8.26	8.20	7.75	7.11	6.45	6.41	6.04	4.98	4.93	4.05	-	5.81	4.49	-1.32
PCE Deflator YoY (25)	4.42	4.52	4.65	5.22	5.85	5.97	6.12	6.39	6.77	6.41	6.52	6.88	6.39	6.26	6.29	6.13	5.66	5.30	5.36	5.04	4.17	4.34	3.85	-	4.86	4.10	-0.76
Core PCE Deflator YoY (20)	3.87	3.88	3.92	4.31	4.82	5.04	5.21	5.42	5.36	5.03	4.88	5.04	4.70	4.93	5.20	5.10	4.80	4.62	4.69	4.65	4.61	4.68	4.62	-	4.65	4.65	0.00
M2 Money Supply YoY (22)	13.00	13.64	12.85	12.75	12.49	12.74	11.39	10.05	9.36	7.76	6.04	5.65	5.03	3.89	2.67	1.50	0.39	-0.89	-1.62	-2.29	-3.95	-4.62	-3.97	-	-2.62	-4.30	-1.68

Comments

This exhibit catalogs select inputs to the model Hedgeye employs to forecast rates of change in US real GDP.

The model is re-trained quarterly to enhance its accuracy.

As noted in the immediately prior Commentary, Hedgeye expects real US GDP growth to accelerate modestly in the current quarter (3Q2023) and to decelerate in 4Q2023 and 1Q2024.

Given the generally gloomy (red) character of newly arriving data at left, our presumption is that our current projections for real GDP growth are more likely to prove too optimistic than too pessimistic, if indeed they miss the ultimate mark.

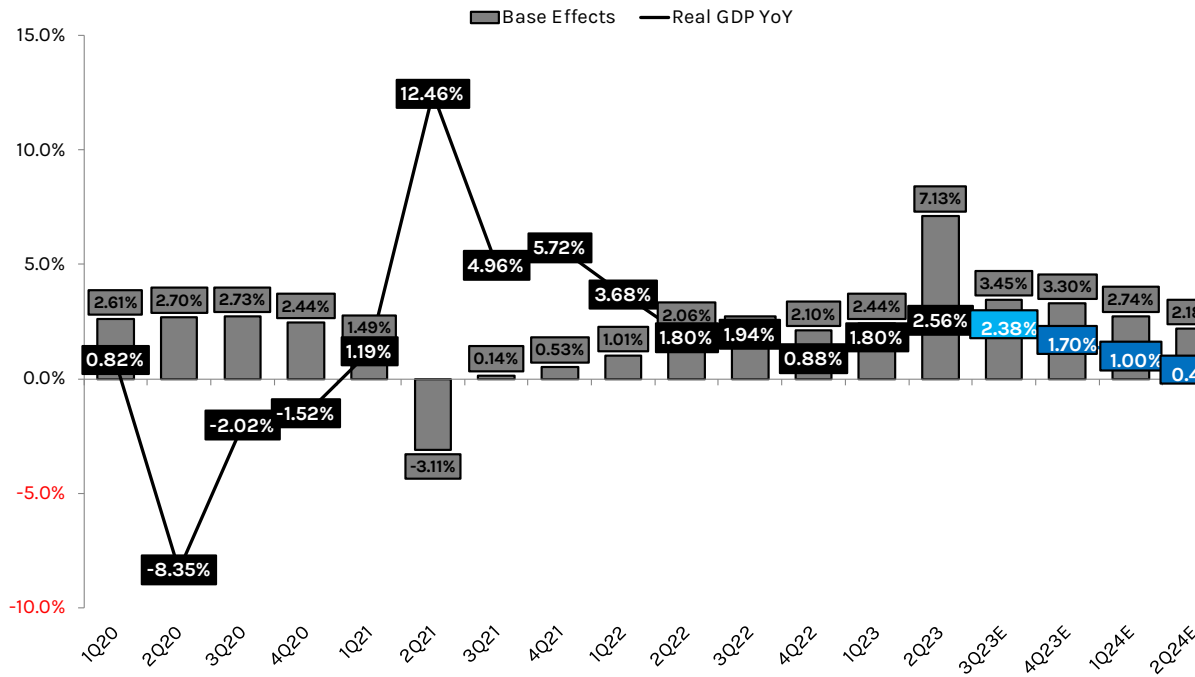
Conditional Probabilities in Practice

United States

GROWTH	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23E	4Q23E	1Q24E	2Q24E
Base Effects	2.61%	2.70%	2.73%	2.44%	1.49%	3.11%	4.14%	5.53%	1.01%	2.06%	1.97%	2.10%	2.44%	2.13%	3.45%	3.30%	2.74%	2.18%
Real GDP YoY	0.82%	-8.35%	-2.02%	-1.52%	1.19%	12.46%	4.96%	5.72%	3.68%	1.80%	1.94%	0.88%	1.80%	2.56%	2.38%	1.70%	1.00%	0.40%
GIP Model Quad	3	4	2	2	2	2	3	2	3	3	1	4	1	1	4	4	3	3
Unconditional Probability Of Forecasted Delta															83%	80%	80%	80%
Conditional Probability Of Forecasted Delta															56%	75%	75%	71%
Conditional Probability Of Quad 1															37.3%	13.3%	12.1%	13.2%
Conditional Probability Of Quad 2															6.3%	12.2%	12.6%	15.4%
Conditional Probability Of Quad 3															8.1%	35.8%	38.3%	38.3%
Conditional Probability Of Quad 4															48.3%	38.7%	37.0%	33.1%

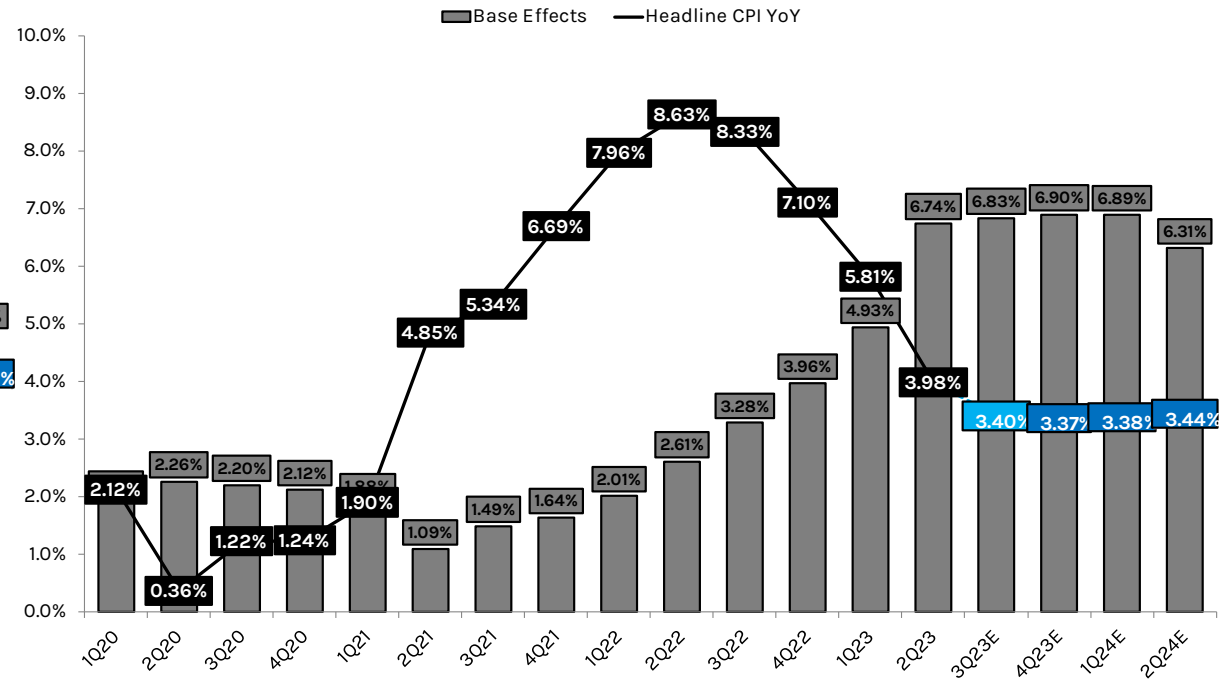
INFLATION	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23E	4Q23E	1Q24E	2Q24E
Base Effects	1.93%	2.26%	2.20%	2.12%	1.88%	1.09%	1.49%	1.64%	2.01%	2.61%	3.28%	3.96%	4.93%	6.74%	6.83%	6.90%	6.89%	6.31%
Headline CPI YoY	2.12%	0.36%	1.22%	1.24%	1.90%	4.85%	5.34%	6.69%	7.96%	8.63%	8.33%	7.10%	5.81%	3.98%	3.40%	3.37%	3.38%	3.44%
GIP Model Quad	3	4	2	2	2	2	3	2	3	3	1	4	1	1	4	4	3	3
Unconditional Probability Of Forecasted Delta															73%	68%	68%	68%
Conditional Probability Of Forecasted Delta															86%	52%	51%	54%
Conditional Probability Of Quad 1															37.3%	13.3%	12.1%	13.2%
Conditional Probability Of Quad 2															6.3%	12.2%	12.6%	15.4%
Conditional Probability Of Quad 3															8.1%	35.8%	38.3%	38.3%
Conditional Probability Of Quad 4															48.3%	38.7%	37.0%	33.1%

United States



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

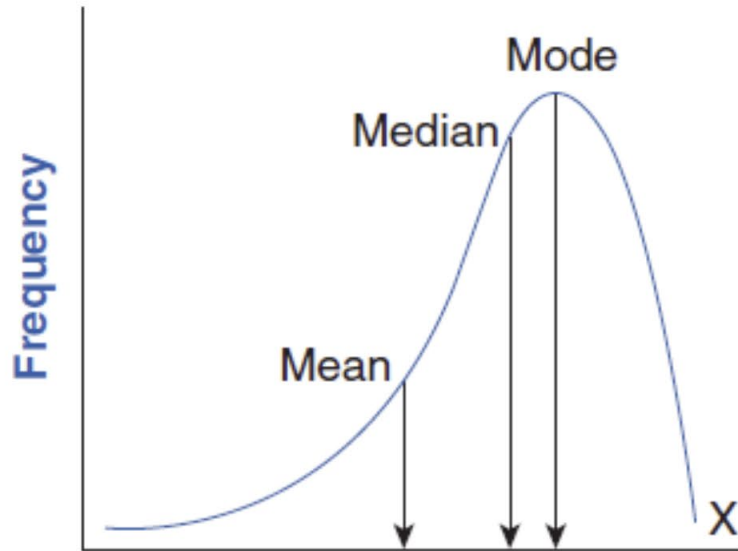
United States



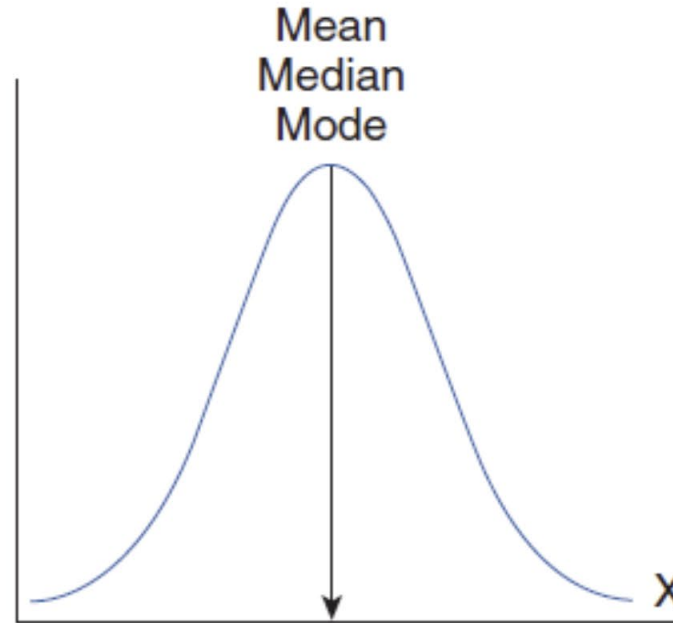
Data Source: BEA, BLS .Light Blue box = Hedgeye Nowcast Model estimate. Dark Blue boxes = Hedgeye Comparative Base Effects Model estimates.

One Geek's View of Effective Investing

(a) Negatively skewed

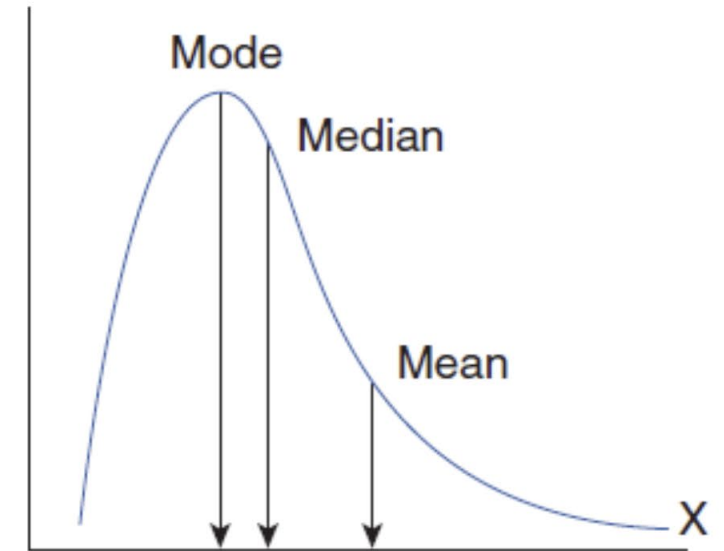


(b) Normal (no skew)

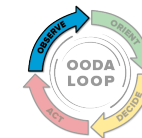


The normal curve represents a perfectly symmetrical distribution

(c) Positively skewed



Illustrative Edition of G20 Quad Projections



7/10/2023	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					
	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23E	3Q23E	4Q23E	1Q24E	COUNTRY	1Q23	2Q23E	3Q23E	4Q23E		1Q24E	1Q24E Less 2Q23E	2Q23E	3Q23E	4Q23E	1Q24E	COUNTRY	1Q23	2Q23E		3Q23E	4Q23E	1Q24E	1Q24E Less 2Q23E	2Q23E	3Q23E
Argentina	2	2	3	4	3	2	3	3	3	3	1	1	1	Argentina	1.30	-4.60	-4.35	-3.90	-3.49	111bps	98	54	57	57	Argentina	101.87	116.34	116.25	116.14	116.12	-22bps	98	51	51	50
Australia	2	2	4	2	3	2	2	3	3	4	1	1	1	Australia	2.27	1.11	1.21	1.26	1.32	21bps	98	54	52	53	Australia	6.14	5.91	5.70	5.22	4.73	-170bps	76	73	98	98
Brazil	2	2	3	3	2	2	4	4	1	4	2	2	3	Brazil	4.00	1.55	1.65	1.73	1.29	-26bps	98	53	53	63	Brazil	5.34	3.95	4.69	5.56	5.80	185bps	98	85	91	61
Canada	2	2	3	3	3	2	4	4	1	4	1	1	2	Canada	2.21	0.46	0.51	0.62	0.79	33bps	98	52	54	56	Canada	5.15	3.75	3.43	3.35	3.57	-18bps	98	75	57	67
China	1	3	4	3	1	3	2	4	4	1	4	1	3	China	3.30	8.12	4.18	4.78	3.73	-439bps	98	98	62	71	China	1.27	0.10	0.05	0.00	0.62	52bps	98	53	53	84
Eurozone	2	2	3	2	2	3	3	3	4	4	1	4	3	Eurozone	1.00	0.56	0.61	0.46	0.36	-20bps	64	52	55	53	Eurozone	8.00	6.20	4.67	3.43	3.68	-252bps	98	98	98	68
France	2	2	3	2	3	3	3	3	2	4	1	4	4	France	0.87	0.69	0.76	0.40	0.30	-40bps	55	52	60	53	France	7.00	6.07	5.13	4.35	3.90	-217bps	98	98	98	91
Germany	3	2	3	3	2	3	3	3	4	4	1	1	3	Germany	-0.17	-0.39	-0.29	0.14	0.10	49bps	56	53	63	51	Germany	8.77	6.90	5.48	3.82	4.53	-237bps	98	98	98	98
India	1	2	4	4	3	2	4	4	2	1	2	2	4	India	6.06	6.27	6.33	6.40	5.18	-109bps	54	51	51	70	India	6.21	4.41	4.86	5.35	4.65	23bps	98	77	79	92
Indonesia	1	2	3	2	3	2	2	3	1	4	1	4	4	Indonesia	5.03	4.06	4.35	4.01	3.75	-31bps	98	67	70	65	Indonesia	5.24	3.95	2.98	2.71	2.59	-136bps	98	98	63	56
Italy	2	2	3	2	3	3	3	3	1	4	1	4	3	Italy	1.90	0.70	0.81	0.67	0.49	-21bps	81	53	54	55	Italy	9.53	7.77	6.05	3.47	3.82	-395bps	98	98	98	71
Japan	3	1	3	3	3	2	3	3	1	4	1	1	4	Japan	1.90	0.86	1.01	1.27	0.92	6bps	82	55	58	61	Japan	3.60	3.27	2.70	1.88	1.82	-145bps	73	89	98	55
Mexico	2	2	4	3	2	2	2	4	1	4	1	1	3	Mexico	3.73	1.27	1.38	1.42	0.39	-88bps	98	52	51	72	Mexico	7.46	5.71	4.84	4.50	4.63	-108bps	98	98	76	61
Russia	2	2	3	2	3	3	1	1	1	1	2	3	2	Russia	-1.80	-0.05	1.12	1.02	1.52	158bps	93	79	53	63	Russia	8.76	2.56	3.47	3.83	3.93	1370bps	98	72	59	53
South Africa	1	2	3	3	2	3	2	4	4	4	1	1	2	South Africa	0.20	0.13	0.35	1.23	1.56	143bps	52	55	71	58	South Africa	7.00	6.37	5.92	5.72	5.77	-60bps	90	78	63	53
South Korea	2	2	3	2	3	3	2	4	4	1	1	1	2	South Korea	0.90	1.02	1.12	2.17	2.67	165bps	56	55	97	72	South Korea	4.73	3.23	2.70	2.50	2.63	-60bps	98	94	67	61
Spain	2	2	3	2	2	2	3	4	1	4	1	3	4	Spain	4.20	1.45	1.75	1.55	1.25	-20bps	98	56	54	56	Spain	5.00	2.77	1.12	1.68	1.42	-135bps	98	98	84	66
Turkey	2	2	3	2	3	2	3	4	1	4	1	4	1	Turkey	4.00	1.59	3.01	2.73	3.52	193bps	92	75	55	64	Turkey	54.46	40.49	36.11	34.38	31.68	-8820bps	98	98	71	83
United Kingdom	2	2	3	2	2	3	3	3	4	4	1	1	4	United Kingdom	0.20	-0.15	0.15	0.20	0.05	20bps	56	56	51	53	United Kingdom	10.20	8.58	7.90	6.47	6.08	-250bps	98	95	98	75
United States	2	2	3	2	3	3	1	4	1	4	1	4	3	United States	1.80	1.65	1.71	0.73	0.49	-116bps	56	52	87	59	United States	5.81	4.15	3.66	3.30	3.31	-84bps	98	86	77	51
MODE/MEDIAN	2	2	3	2	3	2	3	4	1	4	1	1	3	MODE/MEDIAN	1.90	0.94	1.12	1.25	1.08	14bps	87	54	55	58	MODE/MEDIAN	6.60	5.06	4.76	3.82	3.92	-115bps	98	92	78	67

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.

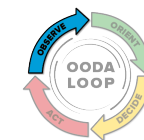
Comments

This exhibit comprises actual and projected rates of change in real GDP growth and inflation for G20 economies plus the Eurozone taken as a whole.

As the columns labeled Estimates suggest, Quad outlooks over multi-quarter horizons of presumed keenest interest to CA subscribers are decidedly mixed, with Asia ex-China arguably being the geography holding the most promise for allocators seeking (or compelled by applicable policy guidelines) to make fresh purchases of stocks on a diversified if not fully indexed basis.

FWIW, Hedgeye generally eschews fully indexed approaches to stock investing, for reasons telegraphed in Return Tendencies By Quad below.

Illustrative Edition of EM Quad Projections



7/10/2023	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					
	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23E	3Q23E	4Q23E	1Q24E	COUNTRY	1Q23	2Q23E	3Q23E	4Q23E	1Q24E	1Q24E Less 2Q23E	2Q23E	3Q23E	4Q23E	1Q24E	COUNTRY	1Q23	2Q23E	3Q23E	4Q23E	1Q24E	1Q24E Less 2Q23E	2Q23E	3Q23E	4Q23E	1Q24E
Argentina	2	2	3	4	3	2	3	3	3	3	1	1	1	Argentina	1.30	-4.60	-4.35	-3.90	-3.49	111bps	98	54	57	57	Argentina	101.87	116.34	116.25	116.14	116.12	-22bps	98	51	51	50
Brazil	2	2	3	3	2	2	4	4	1	4	2	2	3	Brazil	4.00	1.55	1.65	1.73	1.29	-26bps	98	53	53	63	Brazil	5.34	3.95	4.69	5.56	5.80	185bps	98	85	91	61
Chile	2	2	3	3	3	3	3	4	1	4	1	1	1	Chile	-0.63	-0.73	-0.33	-0.12	1.26	200bps	52	58	54	78	Chile	11.79	8.73	6.44	5.90	5.66	-307bps	98	98	79	63
China	1	3	4	3	1	3	2	4	4	1	4	1	3	China	3.30	8.12	4.18	4.78	3.73	-439bps	98	98	62	71	China	1.27	0.10	0.05	0.00	0.62	52bps	98	53	53	84
Colombia	1	2	3	3	3	2	3	3	2	4	1	1	1	Colombia	3.00	0.73	0.88	0.93	1.08	35bps	95	53	51	53	Colombia	13.29	12.36	10.98	9.66	7.99	-437bps	96	98	98	98
Czech Republic	1	2	3	2	2	3	3	4	3	4	1	1	4	Czech Republic	-0.20	-0.40	0.25	2.15	1.75	215bps	56	69	98	62	Czech Republic	16.40	11.45	9.70	9.63	6.73	-472bps	98	98	53	98
Greece	2	2	3	3	2	3	3	1	4	4	1	2	1	Greece	2.30	0.71	0.91	0.96	1.06	35bps	80	54	51	52	Greece	6.40	3.77	2.40	2.62	2.30	-147bps	98	98	59	64
Hong Kong	2	4	3	4	4	1	3	1	2	3	1	2	3	Hong Kong	2.70	2.63	6.18	6.83	2.98	35bps	52	98	71	98	Hong Kong	1.93	1.98	0.62	1.18	1.38	-60bps	52	98	77	59
India	1	2	4	4	3	2	4	4	2	1	2	2	4	India	6.06	6.27	6.33	6.40	5.18	-109bps	54	51	51	70	India	6.21	4.41	4.86	5.35	4.65	23bps	98	77	79	92
Indonesia	1	2	3	2	3	2	2	3	1	4	1	4	4	Indonesia	5.03	4.06	4.35	4.01	3.75	-31bps	98	67	70	65	Indonesia	5.24	3.85	2.98	2.71	2.59	-136bps	98	98	63	56
Israel	3	2	3	2	3	3	3	3	1	4	1	1	4	Israel	4.14	2.66	2.78	2.91	2.75	10bps	89	53	54	54	Israel	5.20	4.67	3.95	3.58	3.17	-150bps	89	98	77	80
Malaysia	2	2	4	2	1	2	2	4	4	4	2	4	2	Malaysia	5.60	3.17	3.72	3.57	4.47	130bps	98	61	53	68	Malaysia	3.59	3.03	3.07	2.87	3.48	45bps	76	52	59	79
Mexico	2	2	4	3	2	2	2	4	1	4	1	1	3	Mexico	3.73	1.27	1.38	1.42	0.39	-88bps	98	52	51	72	Mexico	7.46	5.71	4.84	4.50	4.63	-108bps	98	98	76	61
Peru	2	2	3	3	2	3	3	4	3	1	1	1	1	Peru	-0.44	-0.33	0.55	1.35	2.66	300bps	51	60	59	65	Peru	8.57	7.44	5.88	5.31	5.10	-234bps	98	98	89	64
Philippines	2	1	3	1	1	3	2	3	3	4	1	4	1	Philippines	6.40	5.60	5.70	4.55	5.35	-25bps	64	52	71	64	Philippines	8.30	6.03	4.98	4.53	4.48	-155bps	98	98	72	52
Poland	1	2	3	2	2	3	3	3	4	4	1	4	1	Poland	-0.30	-0.48	1.37	1.17	2.87	335bps	56	98	57	98	Poland	17.03	13.07	10.57	8.82	8.12	-495bps	98	98	98	82
Russia	2	2	3	2	3	3	1	1	1	1	2	3	2	Russia	-1.80	-0.05	1.12	1.02	1.52	158bps	93	79	53	63	Russia	8.76	2.56	3.47	3.83	3.93	137bps	98	72	59	53
Saudi Arabia	1	2	1	2	2	2	3	3	4	4	3	1	1	Saudi Arabia	3.78	2.59	2.27	2.60	2.63	3bps	78	58	58	51	Saudi Arabia	3.02	2.66	5.05	4.66	4.42	176bps	66	98	67	61
South Africa	1	2	3	3	2	3	2	4	4	4	1	1	2	South Africa	0.20	0.13	0.35	1.23	1.56	143bps	52	55	71	58	South Africa	7.00	6.37	5.92	5.72	5.77	-60bps	90	78	63	53
South Korea	2	2	3	2	3	3	2	4	4	1	1	1	2	South Korea	0.90	1.02	1.12	2.17	2.67	165bps	56	55	97	72	South Korea	4.73	3.23	2.70	2.50	2.63	-60bps	98	94	67	61
Taiwan	2	3	3	2	3	3	1	4	3	1	1	1	1	Taiwan	-2.87	1.29	1.80	2.97	3.54	225bps	98	71	98	74	Taiwan	2.61	2.04	1.85	1.82	1.75	-29bps	94	65	52	56
Thailand	1	2	4	2	2	2	2	4	1	4	1	1	4	Thailand	2.70	2.66	3.71	4.80	4.50	184bps	51	73	74	57	Thailand	3.88	1.15	0.69	0.57	0.37	-77bps	98	72	56	60
Turkey	2	2	3	2	3	2	3	4	1	4	1	4	1	Turkey	4.00	1.59	3.01	2.73	3.52	193bps	92	75	55	64	Turkey	54.46	40.49	36.11	34.38	31.68	-882bps	98	98	71	83
MODE/MEDIAN	2	2	3	2	3	3	3	4	1	4	1	1	1	MODE/MEDIAN	2.70	1.29	1.65	2.17	2.67	138bps	80	58	57	64	MODE/MEDIAN	6.40	4.41	4.84	4.53	4.48	7bps	98	98	67	61

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.

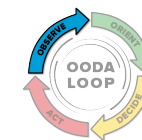
Comments

This exhibit documents actual and projected rates of change in real GDP growth and inflation for 23 economies labeled “Emerging Markets” by commercial arbiters of such things and in turn by countless investors who take such labels as gospel.

(Are Hong Kong, Israel, South Korea and Taiwan rightly considered emerging economies? Not by our lights. Are China or Russia rightly considered plausible destinations for capital stewarded by fiduciaries on behalf of others? We have our doubts, to be conveyed in future editions of CIO Corner.)

As the Estimates at left suggest, Quad outlooks for the nations examined over multi-quarter horizons of presumed interest to CA subscribers are mixed, with Chile, Columbia, Peru and Taiwan arguably holding the most promise for country-specific stock baskets like those appraised in Orient and Decide.

Return Tendencies By Quad



Quad 1: Goldilocks

Best Asset Classes:

Equities, Credit, Commodities, FX

Worst Asset Classes:

Fixed Income, USD

Best Equity Sectors:

Tech, Consumer Discretionary, Materials, Industrials, Telecom

Worst Equity Sectors:

Utilities, REITS, Consumer Staples, Financials, Energy

Best Equity Style Factors:

High Beta, Momentum, Leverage, Secular Growth, Mid Caps

Worst Equity Style Factors:

Low Beta, Defensives, Value, Dividend Yield, Small Caps

Best Fixed Income Sectors:

BDCs, Convertibles, HY Credit, EM \$ Debt, Leveraged Loans

Worst Fixed Income Sectors:

TIPS, Short Duration Treasurys, MBS, Treasury Belly, Long Bond

Quad 2: Reflation

Best Asset Classes:

Commodities, Equities, Credit, FX

Worst Asset Classes:

Fixed Income, USD

Best Equity Sectors:

Tech, Consumer Discretionary, Industrials, Energy, Financials

Worst Equity Sectors:

Telecom, Utilities, REITS, Consumer Staples, Health Care

Best Equity Style Factors:

Secular Growth, High Beta, Small Caps, Cyclical Growth, Momentum

Worst Equity Style Factors:

Low Beta, Dividend Yield, Value, Defensives, Size

Best Fixed Income Sectors:

Convertibles, BDCs, Preferreds, Leveraged Loans, HY Credit

Worst Fixed Income Sectors:

Long Bond, Treasury Belly, Munis, MBS, IG Credit

Quad 3: Stagflation

Best Asset Classes:

Gold, Commodities, Fixed Income

Worst Asset Classes:

Credit

Best Equity Sectors:

Utilities, Tech, Energy, Industrials, Consumer Discretionary

Worst Equity Sectors:

Financials, REITS, Materials, Telecom, Consumer Staples

Best Equity Style Factors:

Secular Growth, Momentum, Mid Caps, Low Beta, Quality

Worst Equity Style Factors:

Small Caps, Dividend Yield, Value, Defensives, Size

Best Fixed Income Sectors:

Munis, EM \$ Debt, Long Bond, TIPS, Treasury Belly

Worst Fixed Income Sectors:

BDCs, Preferreds, Convertibles, Leveraged Loans, HY Credit

Quad 4: Deflation

Best Asset Classes:

Fixed Income, Gold, USD

Worst Asset Classes:

Commodities, Equities, Credit, FX

Best Equity Sectors:

Consumer Staples, Utilities, REITS, Health Care, Telecom

Worst Equity Sectors:

Energy, Tech, Industrials, Financials, Materials

Best Equity Style Factors:

Low Beta, Dividend Yield, Quality, Defensives, Value

Worst Equity Style Factors:

High Beta, Momentum, Leverage, Secular Growth, Cyclical Growth

Best Fixed Income Sectors:

Long Bond, Treasury Belly, IG Credit, Munis, MBS

Worst Fixed Income Sectors:

Preferreds, EM Local Currency, BDCs, Leveraged Loans, TIPS

Comments

As with all forward-looking analyses furnished by Hedgeye—or indeed any research provider—the outcomes projected here are properly viewed as informed guesstimates as distinct from certainties: tendencies gleaned from regularly updated studies of actual asset price changes under each of the four Quads examined, with Quads as used here reflecting rates of change in US real GDP growth and inflation as measured by so-called Headline CPI.

What, if anything, should careful allocators do with the information furnished at left? Our answer to this question is well known to Hedgeye votaries: let Signals trump Quads, as we ourselves do when crafting the exposure appraisals furnished in Orient Dashboard.

Illustrative Edition of Orient & Decide

Orient = Apply A/B Tests		A Test = Quads				B Test = Signals						Decide = Craft Appraisals		
Asset Class	Ticker	3Q23	4Q23	1Q24	2Q24	Trend	Change vs. Prior	Last Price vs. Trend	Tail	Change vs. Prior	Last Price vs. Tail	Return prospects through Q2 2024	Change vs. Prior	Prior Appraisal
Bonds														
iShares Core U.S. Aggregate Bond ETF	AGG	4	4	3	3	97.96	-0.02%	-2.93%	98.45	-0.40%	-3.41%	Negative	▼	Neutral
iShares 1-3 Year Treasury Bond ETF	SHY	4	4	3	3	80.85	-0.33%	0.11%	81.11	-0.37%	-0.21%	Negative	▼	Neutral
iShares 7-10 Year Treasury Bond ETF	IEF	4	4	3	3	96.96	-0.32%	-4.10%	97.88	-1.28%	-5.01%	Negative	▼	Neutral
iShares 20+ Year Treasury Bond ETF	TLT	4	4	3	3	101.67	-1.25%	-9.13%	105.51	-0.60%	-12.43%	Negative	▬	Negative
iShares iBoxx \$ High Yield Corporate Bond ETF	HYG	4	4	3	3	75.75	-0.20%	-2.39%	76.21	1.32%	-2.98%	Strong Negative	▬	Strong Negative
Commodities														
United States Oil Fund LP	USO	4	4	3	3	66.8	-0.24%	9.15%	67.14	-1.28%	8.59%	Positive	▲	Neutral
ProShares Bitcoin Strategy ETF	BITO	2	1	3	3	16.42	-1.14%	-17.97%	17.98	-0.66%	-25.08%	Negative	▼	Neutral
iShares S&P GSCI Commodity Indexed Trust	GSG	4	1	3	1	20.15	-1.32%	5.67%	20.93	-4.82%	1.73%	Neutral	▬	Neutral
Currencies														
Invesco CurrencyShares Euro Trust	FXE	4	1	2	1	101.52	1.19%	-0.97%	101.75	0.06%	-1.19%	Negative	▬	Negative
Invesco DB US Dollar Index Bullish Fund	UUP	4	4	3	3	28.11	0.32%	2.36%	27.95	1.08%	2.95%	Positive	▬	Positive
SPDR Gold Shares	GLD	4	1	3	1	175	0.00%	0.01%	174	0.58%	0.58%	Positive	▬	Positive
Invesco CurrencyShares Japanese Yen Trust	FXJ	1	1	4	4	68.81	0.72%	-7.60%	69.9	-0.13%	-9.04%	Negative	▬	Negative
Non-US Stocks														
iShares MSCI Japan ETF	EWJ	1	1	4	4	60.25	1.83%	-1.76%	58.66	2.14%	0.90%	Positive	▬	Positive
iShares JPX-Nikkei 400 ETF	JPXN	1	1	4	4	63.94	1.35%	-1.13%	62.09	1.50%	1.81%	Positive	▬	Positive
iShares MSCI Japan Small-Cap ETF	SCJ	1	1	4	4	67.78	0.00%	-0.35%	66.8	0.00%	1.11%	Positive	▬	New Ticker
iShares China Large-Cap ETF	FXI	4	1	3	2	28.43	1.61%	-8.49%	28.75	-0.52%	-9.51%	Negative	▼	Neutral
iShares MSCI South Korea ETF	EWY	1	1	2	1	64.01	0.00%	-4.94%	62.23	0.00%	-2.22%	Neutral	▬	New Ticker
iShares MSCI Emerging Markets ex China ETF	EMXC	4	1	3	2	51.13	1.83%	-0.92%	50.4	1.16%	0.52%	Neutral	▬	Neutral
iShares MSCI France ETF	EWQ	4	4	4	1	38.35	1.81%	-3.07%	35.76	-0.64%	3.95%	Negative	▼	Neutral
iShares MSCI Germany ETF	EWG	4	1	3	1	28.57	2.00%	-3.82%	26.97	0.97%	1.89%	Neutral	▬	Neutral
iShares MSCI Hong Kong ETF	EWH	1	2	3	4	19.92	-0.20%	-12.73%	20.15	-1.47%	-13.72%	Negative	▼	Neutral
iShares MSCI India ETF	INDA	3	2	4	3	42.32	1.83%	2.74%	41.67	1.51%	4.34%	Positive	▲	Neutral
iShares MSCI United Kingdom ETF	EWU	1	1	4	1	32.69	1.84%	-3.84%	31.54	1.19%	-0.33%	Neutral	▬	Neutral
US Stocks														
iShares Russell 2000 ETF	IWM	4	4	3	3	201	1.01%	-8.37%	193	6.63%	-4.57%	Negative	▬	Negative
Invesco QQQ Trust Series I	QQQ	4	4	3	3	358	3.47%	0.81%	327	0.31%	10.37%	Neutral	▬	Neutral
SPDR S&P 500 ETF Trust	SPY	4	4	3	3	462	3.13%	-5.41%	432	3.10%	1.16%	Neutral	▬	Neutral
Health Care Select Sector SPDR Fund	XLV	4	4	3	3	131	1.55%	1.71%	130	0.00%	2.49%	Neutral	▬	Neutral
Consumer Staples Select Sector SPDR Fund	XLP	4	4	3	3	74.41	0.57%	-2.39%	73.26	0.45%	-0.86%	Neutral	▬	Neutral
Financial Select Sector SPDR Fund	XLF	4	4	3	3	36.91	0.00%	-8.28%	33.84	0.00%	0.04%	Neutral	▬	New Ticker
Energy Select Sector SPDR Fund	XLE	4	4	3	3	82.05	0.61%	7.43%	79.98	0.82%	10.22%	Positive	▲	Negative
SPDR S&P Oil & Gas Exploration & Production ETF	XOP	4	4	3	3	131	2.34%	13.23%	130	-0.76%	14.10%	Positive	▲	Negative
Real Estate Select Sector SPDR Fund	XLRE	4	4	3	3	39.01	2.74%	-8.15%	40.23	0.27%	-10.94%	Negative	▼	Neutral
Industrial Select Sector SPDR Fund	XLI	4	4	3	3	109	1.87%	-2.86%	104	1.96%	1.81%	Neutral	▬	Neutral
iShares U.S. Home Construction ETF	ITB	4	4	3	3	80.59	6.17%	2.37%	71.9	3.16%	14.74%	Positive	▬	Positive
Utilities Select Sector SPDR Fund	XLU	4	4	3	3	66.93	-0.09%	-6.36%	67.41	2.18%	-7.03%	Neutral	▬	Neutral
iShares U.S. Aerospace & Defense ETF	ITA	4	4	3	3	112	0.00%	2.43%	110	0.92%	4.29%	Positive	▬	Positive
iShares Biotechnology ETF	IBB	4	4	3	3	130	0.00%	-2.86%	132	0.76%	-4.33%	Neutral	▲	Negative
Technology Select Sector SPDR Fund	XLK	4	4	3	3	166	-1.19%	0.28%	155	-1.90%	7.40%	Neutral	▬	Neutral
iShares U.S. Consumer Discretionary ETF	IYC	4	4	3	3	71.4	3.63%	-3.56%	68.49	3.33%	0.54%	Neutral	▬	Neutral
SPDR S&P Retail ETF	XRT	4	4	3	3	73.97	0.00%	-12.88%	74.11	0.00%	-13.05%	Negative	▬	New Ticker

Suggested Design Criteria for 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.

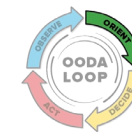
Helpful Attributes

- 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.

Identifying Investment-Related Ends & Means



For Individuals & Families

Aspirational Goals

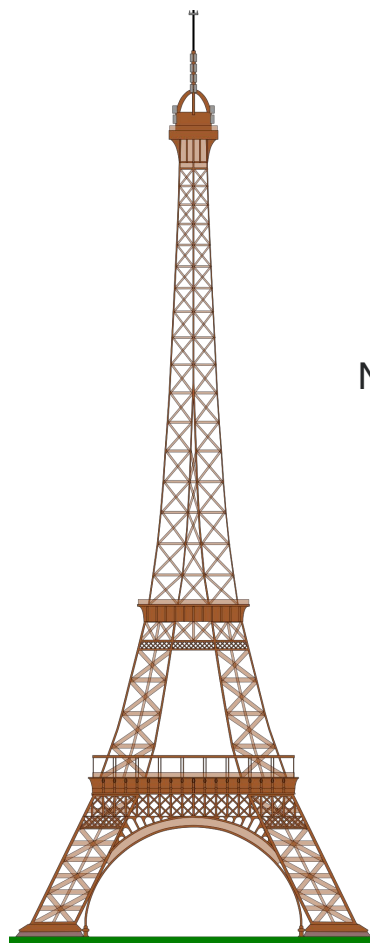
Concentrated Equities inc. Options
Non-Core Investment Realty
Human Capital
Cash Reserves

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.

The Yale Model vs. Wannabes

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

Keen to Help Those In Need

Current (2023) Investment Guidelines—University of [Redacted] *

	Current Policy Allocation	Long-Term Target Allocation	<u>Allowable Ranges</u>	
			<u>Minimum</u>	<u>Maximum</u>
U.S. Equity	18.5%	13.5%	13.5	23.5
Developed Non US Equity	16.0	8.0	11.0	21.0
Emerging Mkt Equity	6.0	7.0	4.0	8.0
Global Equity	2.0	0.0	1.0	3.0
US Fixed Income	5.75	5.0	2.75	8.75
High Yield Fixed Income	3.0	2.5	2.0	4.0
Emerging Mkt Fixed Income	3.0	2.5	2.0	4.0
TIPS	4.0	2.5	2.0	6.0
Private Equity	9.0	9.0	6.0	12.0
Absolute Return – Diversified	23.5	23.5	18.5	28.5
Cross Asset Class	2.0	5.0	0.0	7.0
Opportunistic Equity	0.0	10.0	0.0	12.0
Real Assets	1.25	3.0	0.25	2.25
Real Estate	6.0	8.5	3.0	9.0
Liquidity	0.0	0.0	0.0	10.0
TOTAL	100%	100%		

* University’s identity redacted to avoid embarrassing its trustees and officers.

Channeling Honest Abe = Illustrative IPS *

Risk Parameters. The Portfolio's capital shall be deployed in a manner that seeks to avoid 25% or greater peak-to-trough declines in inflation-adjusted unit values measured in real time based on best available data. While adhering to the primary risk parameter just described, the Portfolio's deployment shall also (a) seek to avoid annualized underperformance of the mean return of \$1+ billion endowments as reported by NACUBO exceeding 3% over 5-year rolling periods and (b) satisfy at all times the liquidity constraints specified in the table below.

Readily Reducible to Cash Within:	Minimum Allocation
One business day	5% of net assets
One month (defined as 20 business days)	15% of net assets
12 months (defined as 240 business days)	25% of net assets
36 months (defined as 720 business days)	50% of net assets

Return Objective. The Portfolio's return objective is to maximize annualized returns net of all costs over 5-year rolling periods without violating the foregoing risk parameters.

Performance Evaluation. To facilitate the Board's ongoing evaluation of Portfolio performance, staff shall provide the Board with quarterly reports detailing the evolving returns and drawdowns of a diverse range of mutually agreed upon investible benchmarks. The benchmarks so tracked shall as a group comprise the broadest identifiable universe of readily exploitable opportunities within which conscientious fiduciaries and investment professionals employed and overseen by them are deploying capital. Reported drawdowns for each benchmark shall reflect at a minimum the largest peak-to-trough decline it has undergone since the Board's initial ratification of this Statement. In assessing total fund results, the Board and staff shall focus on measurement periods comprising full market cycles, defined in peak-to-trough-to-peak or trough-to-peak-to-trough terms.

* Word count = 272 words = precisely the word count of A. Lincoln's *Gettysburg Address*.

Black Holes Abound

Time Horizon
Short-Term
Medium-Term
Long-Term

Dominant Mindset
Intuitive
Informed Guesswork
Strictly Empirical

Amenability to Change
Burkean
Rooseveltian
Jeffersonian

Elemental Risks
Variance
Semi-Variance
Betas

Financial Goals
Total Return
Current Yield
Fecundity

Inconvenient Truths
Second Order Effects
Third Order Effects
Lower Order Effects

Bonus Scheme for Allocators (If Any)
Formulaic—Awarded Individually
Formulaic —Awarded Collectively
Subjective

Discretion
Solo Decider
2+ Independent Deciders
Group Decides

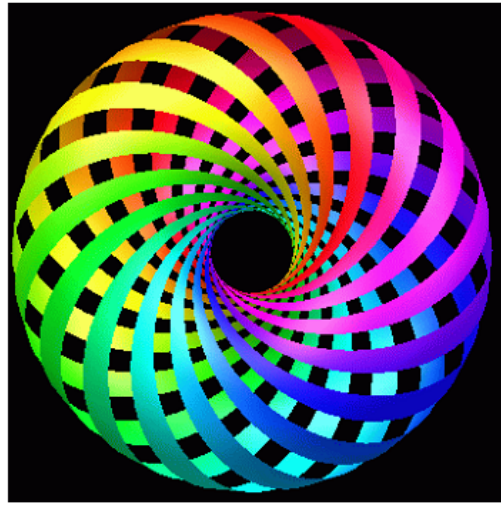
Reversibility
Negligible Cost
Manageable Cost
Intolerable Cost

Bandwidth Needed
Up Front
Ongoing
At Exit

Weiji (危机 Danger/Opportunity)
Environmental
Social
Governance
Analytical Slant
Latest Data Points
First Derivatives
Second Derivatives

Programmatic Values
Transitory
Permanent
Potential

Decision-Making Periodicity
Frequent Regular Meetings
Infrequent Regular Meetings
Meetings As Needed



← Only metrics pursued explicitly by the typical “aligned” investment program

* H/T for “Rightly Understood” to Alexis de Tocqueville in *Democracy in America* (1832).

Case Study in Capital Allocation: Japanese Stocks

Observe

- Japanese stocks have undergone the Mother of All Bears
- Japanese companies and Japan itself are misunderstood

Orient

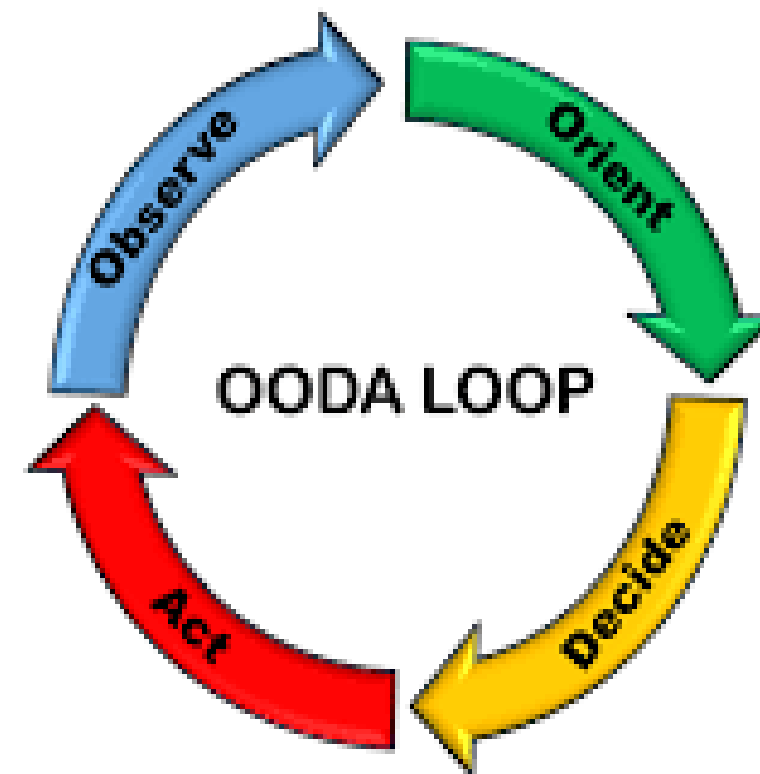
- Set risk parameters and return goals (in that order!)
- A Test / Quads support Core position in Japanese stocks
- B Test / Signals do likewise

Decide

- Build Core position in large cap Japanese stocks
- Broaden exposure to Japan if and as conditions warrant

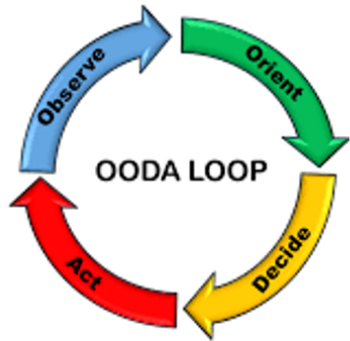
Act

- Execute initial buys with due attention to Signals
- Adjust exposures as goals and conditions warrant



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)

Hedgeye Institutional Research Offerings

Further information available via Sales@hedgeye.com

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