

AAll - Houston Agenda 07-20-24

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- 09:30 No programs in August
Retirement SIG 9/12 & Chapter Mtg 9/21
Books available on India investing
Income SIG Update - John O'Keefe*
- 10:30 A New Policy Paradigm
Doug Ramsay – Leutold Group*

THE INCOME CHALLENGE

- ▶ **1. HyInc* PORTFOLIO UPDATE Y-T-D June 30, 2024**
- ▶ **2. The DIVIDEND CHALLENGE – Full Speed Ahead**
- ▶ **3. The INT'L DIVERSIFICATION CHALLENGE - Soon**

- Appendix A Hybrid Income* - Preserve Principal, Maintain Income, Sustain Portfolio

THE INCOME ASSET CHALLENGE

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WHICH ASSETS, WHICH MARKETS?

- ▶ MARKET HEDGE – Gold
- ▶ DIVIDEND EQUITIES
- ▶ FIXED INCOME
- ▶ ALTERNATIVES – aka Private Transactions

DO THEY MEET INCOME OBJECTIVES?

- ▶ PRESERVE PRINCIPAL*
- ▶ MAINTAIN INCOME STREAM*
- ▶ SUSTAIN PORTFOLIO**

06-22-24 vB

1. UPDATE HyInc PROCESS

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► OBJECTIVES

Today's
Div Quiz



ANALYTIC SEQUENCE;

► Assets

► Constraints

► Positions

- Preserve Principal, Generate Income, Sustain Portfolio
- Monthly Income via Dividends, Options, Interest, Equity Δ
- Simulate Return, Risk, Performance of Asset Classes
- Constrain Assets via Forward Outlook
- Select ETF's, Tickers in many Industry Benchmarks:
 - 1st ETFs/Mutuals, 2nd Pick companies
 - Morningstar >3 stars & positive Risk vs Return
- Rank Order Selection via dividend & option income;
 - Dividends a f(Cash flow, Net equity growth)
 - Company Risk Adjusted Returns, Drawdowns
 - Momentum -> Entry/Exit – ETFs, equity, options

Hybrid Income end Dec 2023 - 1				1st JAN		Q1 - 1st APR				Q2 - 6/30/2024 end - beg July		1st JUL		
ticker	Company - Entity	Asset Class	\$	%		\$	%			ticker	no shares	\$/sh	\$	Pct of Port
GOLD	Barrick Gold Corp	ALT Gold	\$ 39,726	5%		\$ 37,025	4.6%			GOLD	2,196	\$ 16.68	\$ 36,629	
HEDGE			\$ 108,305	14%		\$ 37,025	5%	HEDGE			\$ 36,629	4%		
ENFR	Alerian Energy	US LG CAP VAL Sect Energy ML	\$ 27,061	4%		\$ 29,769	4%			ENFR	1,172	\$ 26.57	\$ 31,140	
DUK	Duke Power	US LG CAP VAL Sect Utility	\$ 23,678	3%		\$ 23,441	3%			DUK	244	\$ 100.23	\$ 24,456	
EOG	Enron Oil & Gas	US LG CAP VAL Sect Energy	\$ 18,720	2%		\$ 20,107	2%			EOG	156	\$ 125.00	\$ 19,500	
EMR	Emerson Electric Co.	US LG CAP VAL Sect Industrial	\$ 31,340	4%		\$ 36,560	5%			EMR	322	\$ 110.16	\$ 35,472	
EPD	Enterprise	US LG CAP VAL Sect Energy ML	\$ 26,972	4%		\$ 30,633	4%			EPD	1,043	\$ 28.98	\$ 30,226	
KLAC	KLA Corporation	US LG CAP GROWTH	\$ 80,219	11%		\$ 98,101	12%			KLAC	138	\$ 824.51	\$ 113,782	
KMI	Kinder Morgan	US LG CAP VAL Sect Energy	\$ 24,377	3%		\$ 25,866	3%			KMI	1,405	\$ 19.87	\$ 27,917	
MRK	Merck & Co., Inc.	US LG CAP VAL Sect Hcare	\$ 33,578	4%		\$ 40,345	5%			MRK	308	\$ 123.80	\$ 38,130	
PXD	Pioneer	US LG CAP VAL Sect Energy	\$ 25,636	3%		\$ 30,091	4%							
RHHBY	Roche Holding AG	US LG CAP VAL Sect Mat'ls	\$ 22,245	3%		\$ 19,617	2%			RHHBY	614	\$ 34.67	\$ 21,287	
STX	Seagate Technology Hold	US LG CAP GROWTH	\$ 35,514	5%		\$ 38,180	5%			STX	416	\$ 103.27	\$ 42,960	
WLKP	Westlake Polymer	US LG CAP VAL Sect Mat'ls	\$ 23,734	3%		\$ 24,875	3%			WLKP	1,119	\$ 22.58	\$ 25,267	
XOM	Exxon Mobil	US LG CAP VAL Sect Energy MLP								XOM	265	\$ 115.12	\$ 30,492	
		US LG CAP GROWTH	\$ 115,733			\$ 136,282								
JEPI	US STOCK MKT Options	US STOCK MKT Options				\$ 50,742	6%			JEPI	886	\$ 56.35	\$ 49,927	
EQUITY			373,075	49%		\$ 468,328	58%	EQUITY			\$ 490,557	59%		
BIL	spdr 1-3 mo Tbills	FX INC GOVT NOTE STerm Treas	\$ 275,454	36%		\$ 77,784	10%			BIL	851	\$ 91.39	\$ 77,758	
CASH-13wk Tbill			\$ 275,454	36%		\$ 77,784	10%	CASH - 13W			\$ 77,758	9%		
TLT	I Share 20+ yr Treasury Bo	FX INC GOVT BOND Ten Yr Tr				\$ 69,413	9%			TLT	750	\$ 91.49	\$ 68,618	
IGIB	I Share 5-10 yr Inv Grade	FX INC CORP BOND Mid Term				\$ 50,345	6%			IGIB	986	\$ 51.07	\$ 50,355	
FTSL	1st Trust Sr Loans	FX INC CORP BOND Mid Term				\$ 50,382	6%			FTSL	1,091	\$ 45.71	\$ 49,870	
IBHD	I Share iBond 2024 Hyiel	FX INC CORP High Yield				\$ 50,393	6%			IBHD	2,174	\$ 23.12	\$ 50,263	
FIXED INCOME				0%		\$ 220,533	27%	FX INC ->			\$ 219,105	26%		
Cash Net	CASH					\$ 1,662	0%			CASH			\$ 11,645	1%
TOTAL			\$ 756,834	100%		\$ 805,332	100%	TOTAL			\$ 835,695	100%		
YtD			Base			6.0%		YtD			9.4%			

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UPDATE
ytd June

PROSPECTING

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FINANCIAL STRENGTH

- Asset Turn
- Equity Leverage
- Interest Coverage
- Payout1 – DPS/EPS
- Payout2 – DPS/CF

GROWTH

- Revenue
- Op Margin
- Opt Earnings
- Net Income
- Per S's – E, D, CF

VALUATION

- Price per; E, S, B, CF, FCF

VOLATILITY

- Option Premium @ 50 Delta

RETURNS

- ROA
- ROE

GDM*

Growth as f(Mkt Cap)

VALUE vs NPV CF

- Company, History
- Industry

HIGH GRADE INCOME PROSPECTS

RANK ORDER SELECTION

QUARTERLY TARGETS

07-22-24 vB

2. Q3 - HyInc vs DIVIDEND "SUSPECTS"

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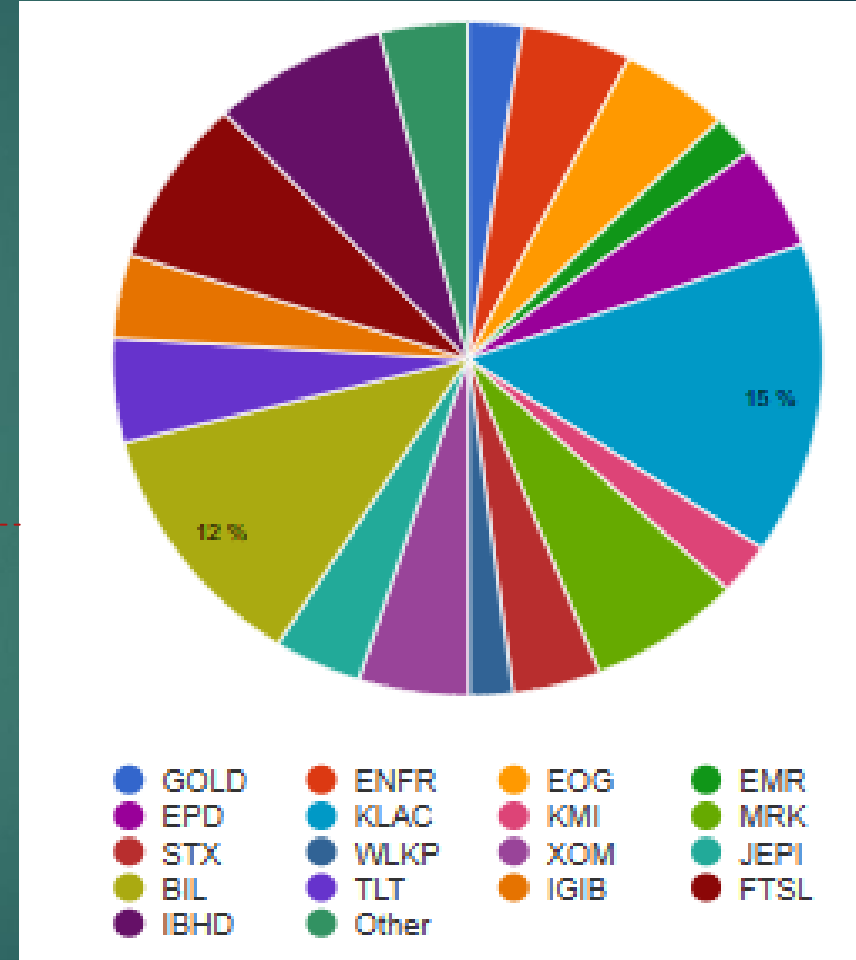
Company	Ticker	Sector	Industry	No.	Div.	Current
Name	Symbol			Yrs	Yield	Dividend
Target Corporation	TGT	Consumer Staples	Consumer Staples Distribution & Retail	30	2.73	1.1000
PepsiCo, Inc.	PEP	Consumer Staples	Beverages	51	2.88	1.2650
Sysco Corporation	SYT	Consumer Staples	Consumer Staples Distribution & Retail	54	2.74	0.5100
Altria Group, Inc.	MO	Consumer Staples	Tobacco	54	8.95	0.9800
Kimberly-Clark Corporation	KMB	Consumer Staples	Household Products	52	3.57	1.2200
The Coca-Cola Company	KO	Consumer Staples	Beverages	62	3.14	0.4850
The Procter & Gamble Company	PG	Consumer Staples	Household Products	68	2.47	1.0065
Colgate-Palmolive Company	CL	Consumer Staples	Household Products	61	2.18	0.5000
NACCO Industries, Inc.	NC	Energy	Oil, Gas & Consumable Fuels	38	3.16	0.2175
Enterprise Products Partners LP	EPD	Energy	Oil, Gas & Consumable Fuels	27	7.34	0.5150
Chevron Corporation	CVX	Energy	Oil, Gas & Consumable Fuels	37	4.04	1.6300
Exxon Mobil Corporation	XOM	Energy	Oil, Gas & Consumable Fuels	41	3.21	0.9500
Franklin Resources, Inc.	BEN	Financials	Capital Markets	44	5.43	0.3100
Alerus Financial Corporation	ALRS	Financials	Diversified Financial Services	25	3.86	0.1900
T. Rowe Price Group, Inc.	TROW	Financials	Capital Markets	38	4.53	1.2400
Cincinnati Financial Corporation	CINF	Financials	Insurance	64	2.80	0.8100
Old Republic International Corporation	ORI	Financials	Insurance	43	3.55	0.2650
Aflac Incorporated	AFL	Financials	Insurance	42	2.39	0.5000
Northeast Indiana Bancorp, Inc.	NIDB	Financials	Thriffs & Mortgage Finance	29	4.52	0.1700
Johnson & Johnson	JNJ	Health Care	Pharmaceuticals	62	3.43	1.2400
Medtronic plc	MDT	Health Care	Health Care Equipment & Supplies	46	3.44	0.6900
Matthews International Corporation	MATW	Industrials	Commercial Services & Supplies	29	3.56	0.2400
C.H. Robinson Worldwide, Inc.	CHRW	Industrials	Air Freight & Logistics	25	3.44	0.6100
ABM Industries Incorporated	ABM	Industrials	Commercial Services & Supplies	57	2.06	0.2250
The Gorman-Rupp Company	GRC	Industrials	Machinery	51	2.17	0.1800
Fastenal Company	FAST	Industrials	Trading Companies & Distributors	25	2.30	0.3900

Company	Ticker	Sector	Industry	No.	Div.	Current
Name	Symbol			Yrs	Yield	Dividend
The Gorman-Rupp Company	GRC	Industrials	Machinery	51	2.17	0.1800
Fastenal Company	FAST	Industrials	Trading Companies & Distributors	25	2.30	0.3900
Stanley Black & Decker, Inc.	SWK	Industrials	Machinery	56	3.54	0.8100
Illinois Tool Works Inc.	ITW	Industrials	Machinery	49	2.29	1.4000
Canadian National Railway Company	CNI	Industrials	Road & Rail	29	2.06	0.6253
Automatic Data Processing, Inc.	ADP	Industrials	Professional Services	48	2.32	1.4000
3M Company	MMM	Industrials	Industrial Conglomerates	66	6.26	1.5100
International Business Machines Corporation	IBM	Information Technology	IT Services	29	4.02	1.6700
Air Products and Chemicals, Inc.	APD	Materials	Chemicals	42	3.00	1.7700
Sonoco Products Company	SON	Materials	Containers & Packaging	42	3.71	0.5200
Universal Health Realty Income Trust	UHT	Real Estate	Healthcare REITs	38	8.05	0.7250
Realty Income Corporation	O	Real Estate	Retail REITs	31	5.76	0.2570
NNN REIT, Inc.	NNN	Real Estate	Retail REITs	34	5.58	0.5650
Federal Realty Investment Trust	FRT	Real Estate	Retail REITs	56	4.19	1.0900
Essex Property Trust, Inc.	ESS	Real Estate	Residential REITs	30	3.98	2.4500
Middlesex Water Company	MSEX	Utilities	Water Utilities	51	2.56	0.3250
Artesian Resources Corporation	ARTNA	Utilities	Water Utilities	31	3.31	0.2897
SJW Group	SJW	Utilities	Water Utilities	57	2.94	0.4000
UGI Corporation	UGI	Utilities	Gas Utilities	36	5.87	0.3750
American States Water Company	AWR	Utilities	Water Utilities	69	2.43	0.4300
Eversource Energy	ES	Utilities	Electric Utilities	26	4.72	0.7150
The York Water Company	YORW	Utilities	Water Utilities	26	2.37	0.2108
Northwest Natural Holding Company	NWN	Utilities	Gas Utilities	68	5.11	0.4875
Black Hills Corporation	BKH	Utilities	Multi-Utilities	54	4.74	0.6500
New Jersey Resources Corporation	NJR	Utilities	Gas Utilities	28	3.85	0.4200
Essential Utilities, Inc.	WTRG	Utilities	Water Utilities	31	3.36	0.3071
California Water Service Group	CWT	Utilities	Water Utilities	57	2.28	0.2800
NextEra Energy, Inc.	NEE	Utilities	Electric Utilities	30	3.08	0.5150
Consolidated Edison, Inc.	ED	Utilities	Multi-Utilities	50	3.52	0.8300
MGE Energy, Inc.	MGEE	Utilities	Electric Utilities	48	2.18	0.4275
Atmos Energy Corporation	ATO	Utilities	Gas Utilities	40	2.73	0.8050
National Fuel Gas Company	NFG	Utilities	Gas Utilities	53	3.73	0.4950

3. DIVERSIFICATION – HyInc OPTIMUM ALLOCATION

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Ticker		A. Base Case	min	B. Optimum	max	
GOLD	Barrick Gold	4.6%	2.5%	2.5%	7.5%	-2.1%
ENFR	Alerian Energy	3.7%	2.0%	5%	5.0%	1.3%
DUK	Duke Energy	3.0%	2.0%	2%	5.0%	-1.0%
EOG	EOG Resources	2.6%	2.0%	5%	5.0%	2.4%
EMR	Emerson	4.4%	2.0%	2%	5.0%	-2.4%
EPD	Enterprise	3.7%	2.0%	5%	5.0%	1.3%
KLAC	KLA Tencor	12.0%	7.5%	15%	15.0%	3.0%
KMI	Kinder Morgan	3.2%	2.0%	2%	5.0%	-0.8%
MRK	Merck	5.0%	2.0%	7%	5.0%	2.0%
RHHBY	Roche Holding	2.3%	2.0%	2%	5.0%	-0.3%
STX	Seagate	4.5%	4.0%	4%	7.0%	-0.5%
WLKP	Westlake Polym	3.0%	2.0%	2%	5.0%	-1.0%
XOM	Exxon Mobil	3.9%	2.0%	5%	5.0%	1.1%
JEPI	JPM Eq Prem	6.2%	2.0%	4.0%	10.0%	-2.2%
BIL	spdr 1-3 mo Tb	9.8%	5.0%	12.0%	12.0%	2.2%
TLT	20 yr Treas	8.3%	5.0%	5.0%	12.0%	-3.3%
IGIB	5-10 yr Corp Bond		4.0%	4.0%	8.0%	4.0%
FTSL	Senior Loans	6.3%	4.0%	8.0%	8.0%	1.7%
IBHD	HY Bonds	6.4%	4.0%	8.0%	8.0%	1.6%
Au Hedge		4.6%		2.5%		-2.1%
LC Value		41.8%		37.5%		-4.3%
LC Growth		16.5%		19.0%		2.5%
JEPI		6.2%		4.0%		-2.2%
BIL		9.8%		12.0%		2.2%
FIX INC		21.0%		25.0%		4.0%
Expected Return						
	A. Base					
		12.13%	11.40%			0.84
		15.37%	11.49%			1.11



3. DIVERSIFICATION: – INTERNATIONAL SUSPECTS

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ASE Technology Holding Co Ltd ADR ASX
Canadian Imperial Bank of Commerce CM
Novartis AG ADR NVS
Petroleo Brasileiro SA Petrobras ADR
Shell PLC ADR
Unilever PLC ADR UL
Canadian Natural Resources Ltd CNQ
AstraZeneca PLC ADR AZN
ASML Holding NV ADR ASML
Linde PLC LIN
SAP SE ADR SAP
Sanofi SA ADR SNY
GSK PLC ADR GSK
Nestle SA NSRGF
Novartis AG ADR NVS
L'Oreal SA ADR LRLCY
Lvmh Moet Hennessy Louis Vuitton SE ADR

2. THE DIVIDEND CHALLENGE

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Q1 Historical Contribution

1. According to Ibbotson, from 1926 to 2019, what percentage of total returns of U.S. stocks have come from dividends?

- ☐ 15%
- ☐ 20%
- ☐ 30%
- ☐ 40%

✓ 40%

Correct!

Counterpoint – 1926 is a ways back, contribution of dividends to return will look very different for different company classes under shorter time periods.

Also, the economy has changed dramatically over the years & Big Techs, Buybacks & ETFs are more recent phenomena.

Source: AAll - Hageman

2. THE DIVIDEND CHALLENGE

Q2 Stock Price and Yield

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4. Which statement is true?

- ☐ Stock price and dividend yield are DIRECTLY correlated. (Stock price and dividend yield go up and down together.)
- ☐ Stock price and dividend yield are INVERSLEY correlated. (Stock price and dividend yield go in opposite directions.)

✓ Stock price and dividend yield are INVERSLEY correlated. (Stock price and dividend yield go in opposite directions.)

Correct! With a static dividend payment amount, the dividend yield goes up as the stock price falls.

Counterpoint – Solid dividend companies, like Aristocrats, may maintain higher valuations than less credit worthy Companies.

Source: AAll - Hageman

2. THE DIVIDEND CHALLENGE

Q3 Key Dividend Dates

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6. Which is generally considered the most important dividend date?

- ☐ Declaration Date
- ☐ Ex-Dividend Date
- ☐ Payment Date
- ☐ Record Date

✓ Ex-Dividend Date

Correct!

Counterpoint – Ex-dividend is important to the investor buying or selling the stock or related options.

Most dividend investors are sort of interested in getting paid – the payment date.

2. THE DIVIDEND CHALLENGE

Q4 Dividends Strategy

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9. Which is generally considered the higher risk dividend investment strategy?

- ☐ High dividend growth strategy
- ☐ High-yield strategy

✓ High-yield strategy

Correct! This strategy can lead to "reaching for yield" with more risky companies.

Counterpoint – There are dividend Aristocrats (dividend increases over several decades in these, “high yield” companies. High asset-Intensive companies do consistently generate cash flow & pay dividends.

Highest Yielding Dividend Industries

- Basic Materials
 - Oil & Gas
 - Metals
 - Chemicals
 - Construction
 - Wood & Paper Products
- Financials
- Utilities
- REITS

2. THE DIVIDEND CHALLENGE

Q13a Dividend Tactical Strategy

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13. Why is the practice of continually purchasing different dividend-paying stocks before their ex-dividend dates and then selling them a few days later (capturing the dividend) NOT necessarily a viable strategy? (bonus question)

- ☐ The company will only pay a portion of the dividend.
- ☐ The company won't pay the dividend at all.
- ☐ The SEC forbids this practice.
- ☐ Because the price of the stock drops by approximately the same amount as the amount of the dividend being paid.

✓ Because the price of the stock drops by approximately the same amount as the amount of the dividend being paid.

Correct! If this was not the case, investors would continually purchase dividend-paying stocks the day before the ex-dividend date and then sell them a few days later, accumulating unrealistic returns.

Counterpoint – There are several financial services that recommend company stock via absolute purchase or option positions to optimize the lack of “approximately the same amount”.

Source: AAll - Hageman

3. HyInc DIVERSIFICATION – 20 yr LEADERS/LOSERS

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2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Real Estate 37.96%	Emerging Market Equity 34.00%	Real Estate 42.12%	Emerging Market Equity 39.38%	U.S. Fixed Income 5.24%	Emerging Market Equity 78.51%	Small Cap Equity 26.85%	U.S. Fixed Income 7.84%	Real Estate 27.73%	Small Cap Equity 38.82%	Real Estate 15.02%	Large Cap Equity 1.38%	Small Cap Equity 21.31%	Emerging Market Equity 37.28%	Cash Equivalent 1.87%	Large Cap Equity 31.49%	Small Cap Equity 19.96%	Large Cap Equity 28.71%	Cash Equivalent 1.46%	Large Cap Equity 26.29%
Emerging Market Equity 25.55%	Real Estate 15.35%	Emerging Market Equity 32.17%	Developed ex-U.S. Equity 12.44%	Global ex-U.S. Fixed 4.39%	High Yield 58.21%	Real Estate 19.63%	High Yield 4.98%	Emerging Market Equity 18.23%	Large Cap Equity 32.39%	Large Cap Equity 13.69%	U.S. Fixed Income 0.55%	High Yield 17.13%	Developed ex-U.S. Equity 24.21%	U.S. Fixed Income 0.01%	Small Cap Equity 25.52%	Large Cap Equity 18.40%	Real Estate 26.09%	High Yield -11.19%	Developed ex-U.S. Equity 17.94%
Developed ex-U.S. Equity 20.38%	Developed ex-U.S. Equity 14.47%	Developed ex-U.S. Equity 25.71%	Global ex-U.S. Fixed 11.03%	Cash Equivalent 2.06%	Real Estate 37.13%	Emerging Market Equity 18.88%	Global ex-U.S. Fixed 4.36%	Developed ex-U.S. Equity 16.41%	Developed ex-U.S. Equity 21.02%	U.S. Fixed Income 5.97%	Cash Equivalent 0.05%	Large Cap Equity 11.96%	Large Cap Equity 21.83%	High Yield -2.08%	Developed ex-U.S. Equity 22.49%	Emerging Market Equity 18.31%	Small Cap Equity 14.82%	U.S. Fixed Income -13.01%	Small Cap Equity 16.93%
Small Cap Equity 18.33%	Large Cap Equity 4.91%	Small Cap Equity 18.37%	U.S. Fixed Income 6.97%	High Yield -26.16%	Developed ex-U.S. Equity 33.67%	High Yield 15.12%	Large Cap Equity 2.11%	Small Cap Equity 16.35%	High Yield 7.44%	Small Cap Equity 4.89%	Real Estate -0.79%	Emerging Market Equity 11.19%	Small Cap Equity 14.65%	Global ex-U.S. Fixed -2.15%	Real Estate 21.91%	Global ex-U.S. Fixed 10.11%	Developed ex-U.S. Equity 12.62%	Developed ex-U.S. Equity -14.29%	High Yield 13.44%
Global ex-U.S. Fixed 12.54%	Small Cap Equity 4.55%	Large Cap Equity 15.79%	Large Cap Equity 5.49%	Small Cap Equity -33.79%	Small Cap Equity 27.17%	Large Cap Equity 15.06%	Cash Equivalent 0.10%	Large Cap Equity 16.00%	Real Estate 3.67%	High Yield 2.45%	Developed ex-U.S. Equity -3.04%	Real Estate 4.06%	Global ex-U.S. Fixed 10.51%	Large Cap Equity -4.38%	Emerging Market Equity 18.44%	Developed ex-U.S. Equity 7.59%	High Yield 5.28%	Large Cap Equity -18.11%	Emerging Market Equity 9.83%
High Yield 11.13%	Cash Equivalent 3.07%	High Yield 11.85%	Cash Equivalent 5.00%	Large Cap Equity -37.00%	Large Cap Equity 26.47%	Developed ex-U.S. Equity 8.95%	Small Cap Equity -4.18%	High Yield 15.81%	Cash Equivalent 0.07%	Cash Equivalent 0.03%	Small Cap Equity -4.41%	Developed ex-U.S. Equity 2.75%	Real Estate 10.36%	Real Estate -5.63%	High Yield 14.32%	U.S. Fixed Income 7.51%	Cash Equivalent 0.05%	Global ex-U.S. Fixed -18.70%	Real Estate 9.67%
Large Cap Equity 10.88%	High Yield 2.74%	Global ex-U.S. Fixed 8.16%	High Yield 1.87%	Developed ex-U.S. Equity -43.56%	Global ex-U.S. Fixed 7.53%	U.S. Fixed Income 6.54%	Real Estate -6.46%	U.S. Fixed Income 4.21%	U.S. Fixed Income -2.02%	Emerging Market Equity -2.19%	High Yield -4.47%	U.S. Fixed Income 2.65%	High Yield 7.50%	Small Cap Equity -11.01%	U.S. Fixed Income 8.72%	High Yield 7.11%	U.S. Fixed Income -1.54%	Emerging Market Equity -20.09%	Global ex-U.S. Fixed 5.72%
U.S. Fixed Income 4.34%	U.S. Fixed Income 2.43%	Cash Equivalent 4.85%	Small Cap Equity -1.57%	Real Estate -48.21%	U.S. Fixed Income 5.93%	Global ex-U.S. Fixed 4.95%	Developed ex-U.S. Equity -12.21%	Global ex-U.S. Fixed 4.09%	Emerging Market Equity -2.60%	Global ex-U.S. Fixed -3.09%	Global ex-U.S. Fixed -6.02%	Global ex-U.S. Fixed 1.49%	U.S. Fixed Income 3.54%	Developed ex-U.S. Equity -14.09%	Global ex-U.S. Fixed 5.09%	Cash Equivalent 0.67%	Emerging Market Equity -2.54%	Small Cap Equity -20.44%	U.S. Fixed Income 5.53%
Cash Equivalent 1.33%	Global ex-U.S. Fixed -8.65%	U.S. Fixed Income 4.33%	Real Estate -7.39%	Emerging Market Equity -53.33%	Cash Equivalent 0.21%	Cash Equivalent 0.13%	Emerging Market Equity -18.42%	Cash Equivalent 0.11%	Global ex-U.S. Fixed -3.08%	Developed ex-U.S. Equity -4.32%	Emerging Market Equity -14.92%	Cash Equivalent 0.33%	Cash Equivalent 0.86%	Emerging Market Equity -14.57%	Cash Equivalent 2.28%	Real Estate -9.04%	Global ex-U.S. Fixed -7.05%	Real Estate -25.10%	Cash Equivalent 5.01%

3. HyInc DIVERSIFICATION READY:– Global Asset Mix

The Callan 20 year “Periodic Table”

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Real Estate	Emerging Market Equity	Real Estate	Emerging Market Equity	U.S. Fixed Income	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Real Estate	Small Cap Equity	Real Estate	Large Cap Equity	Small Cap Equity	Emerging Market Equity	Cash Equivalent	Large Cap Equity	Small Cap Equity	Large Cap Equity	Cash Equivalent	Large Cap Equity
37.96%	34.00%	42.12%	39.38%	5.24%	78.51%	26.85%	7.84%	27.73%	38.82%	15.02%	1.38%	21.31%	37.28%	1.87%	31.49%	19.96%	28.71%	1.46%	26.29%
Emerging Market Equity	Real Estate	Emerging Market Equity	Developed ex-U.S. Equity	Global ex-U.S. Fixed Income	High Yield	Real Estate	High Yield	Emerging Market Equity	Large Cap Equity	Large Cap Equity	U.S. Fixed Income	High Yield	Developed ex-U.S. Equity	U.S. Fixed Income	Small Cap Equity	Large Cap Equity	Real Estate	High Yield	Developed ex-U.S. Equity
25.55%	15.35%	32.17%	12.44%	4.39%	58.21%	19.63%	4.98%	18.23%	32.39%	13.69%	0.55%	17.13%	24.21%	0.01%	25.52%	18.40%	26.09%	-11.19%	17.94%
Developed ex-U.S. Equity	Developed ex-U.S. Equity	Developed ex-U.S. Equity	Global ex-U.S. Fixed Income	Cash Equivalent	Real Estate	Emerging Market Equity	Global ex-U.S. Fixed Income	Developed ex-U.S. Equity	Developed ex-U.S. Equity	U.S. Fixed Income	Cash Equivalent	Large Cap Equity	Large Cap Equity	High Yield	Developed ex-U.S. Equity	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Small Cap Equity
18.33%	4.91%	4.91%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%	12.54%
Global ex-U.S. Fixed Income	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity	Small Cap Equity
12.54%	4.55%	15.79%	5.49%	-33.79%	27.17%	15.06%	0.10%	16.00%	3.67%	2.45%	-3.04%	4.06%	10.51%	-4.38%	18.44%	7.59%	5.28%	-18.11%	9.83%
High Yield	Cash Equivalent	High Yield	Cash Equivalent	Large Cap Equity	Large Cap Equity	Developed ex-U.S. Equity	Small Cap Equity	High Yield	Cash Equivalent	Cash Equivalent	Small Cap Equity	Developed ex-U.S. Equity	Real Estate	Real Estate	High Yield	U.S. Fixed Income	Cash Equivalent	Global ex-U.S. Fixed Income	Real Estate
11.13%	3.07%	11.85%	5.00%	-37.00%	26.47%	8.95%	-4.18%	15.81%	0.07%	0.03%	-4.41%	2.75%	10.36%	-5.63%	14.32%	7.51%	0.05%	-18.70%	9.67%
Large Cap Equity	High Yield	Global ex-U.S. Equity	High Yield	Developed ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	U.S. Fixed Income	Real Estate	U.S. Fixed Income	U.S. Fixed Income	Emerging Market Equity	High Yield	U.S. Fixed Income	High Yield	Small Cap Equity	U.S. Fixed Income	High Yield	U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed Income
10.88%	2.74%	8.16%	1.87%	-43.56%	7.53%	6.54%	-6.46%	4.21%	-2.02%	-2.19%	-4.47%	2.65%	7.50%	-11.01%	8.72%	7.11%	-1.54%	-20.09%	5.72%
U.S. Fixed Income	U.S. Fixed Income	Cash Equivalent	Small Cap Equity	Real Estate	U.S. Fixed Income	Global ex-U.S. Fixed Income	Developed ex-U.S. Equity	Global ex-U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	U.S. Fixed Income	Developed ex-U.S. Equity	Global ex-U.S. Fixed Income	Cash Equivalent	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income
4.34%	2.43%	4.85%	-1.57%	-48.21%	5.93%	4.95%	-12.21%	4.09%	-2.60%	-3.09%	-6.02%	1.49%	3.54%	-11.01%	-14.09%	5.09%	-2.54%	-20.44%	5.53%
Cash Equivalent	Global ex-U.S. Fixed Income	U.S. Fixed Income	Real Estate	Emerging Market Equity	Cash Equivalent	Cash Equivalent	Emerging Market Equity	Cash Equivalent	Global ex-U.S. Fixed Income	Developed ex-U.S. Equity	Emerging Market Equity	Cash Equivalent	Cash Equivalent	Emerging Market Equity	Cash Equivalent	Real Estate	Global ex-U.S. Fixed Income	Real Estate	Cash Equivalent
1.33%	-8.65%	4.33%	-7.39%	-53.33%	0.21%	0.13%	-18.42%	0.11%	-3.08%	-4.32%	-14.92%	0.33%	0.86%	-14.57%	2.28%	-9.04%	-7.05%	-25.10%	5.01%

Q: What are the best and worst investments of 2023?

A: Best 2023 Large Cap Eq, Worst Cash Eq

Nine Asset Classes 2023 Asset Performance

US Large Cap (highest)

Non-US Dev Equity

US Small Cap

High Yield

EM – Emerging Markets Equity

Real Estate

Non-US Fixed Income

US Fixed Income

Cash Equivalent (lowest)

3. HyInc DIVERSIFICATION & CASH 13wk T-BILLS

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2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Real Estate 37.96%	Emerging Market Equity 34.00%	Real Estate 42.12%	Emerging Market Equity 39.38%	U.S. Fixed Income 5.24%	Emerging Market Equity 78.51%	Small Cap Equity 26.85%	U.S. Fixed Income 7.84%	Real Estate 27.73%	Small Cap Equity 38.82%	Real Estate 15.02%	Large Cap Equity 1.38%	Small Cap Equity 21.31%	Emerging Market Equity 37.28%	Cash Equivalent 1.87%	Large Cap Equity 31.49%	Small Cap Equity 19.96%	Large Cap Equity 28.71%	Cash Equivalent 1.46%	Large Cap Equity 26.29%
Emerging Market Equity 25.55%	Real Estate 15.35%	Emerging Market Equity 32.17%	Developed ex-U.S. Equity 12.44%	Global ex-U.S. Fixed 4.39%	High Yield 58.21%	Real Estate 19.63%	High Yield 4.98%	Emerging Market Equity 18.23%	Large Cap Equity 32.39%	Large Cap Equity 13.69%	U.S. Fixed Income 0.55%	High Yield 17.13%	Developed ex-U.S. Equity 24.21%	U.S. Fixed Income 0.01%	Small Cap Equity 25.52%	Large Cap Equity 18.40%	Real Estate 26.09%	High Yield -11.19%	Developed ex-U.S. Equity 17.94%
Developed ex-U.S. Equity 20.38%	Developed ex-U.S. Equity 14.47%	Developed ex-U.S. Equity 25.71%	Global ex-U.S. Fixed 11.03%	Cash Equivalent 2.06%	Real Estate 37.13%	Emerging Market Equity 18.88%	Global ex-U.S. Fixed 4.36%	Developed ex-U.S. Equity 16.41%	Developed ex-U.S. Equity 21.02%	U.S. Fixed Income 5.97%	Cash Equivalent 0.05%	Large Cap Equity 11.96%	Large Cap Equity 21.83%	High Yield -2.08%	Developed ex-U.S. Equity 22.49%	Emerging Market Equity 18.31%	Small Cap Equity 14.82%	U.S. Fixed Income -13.01%	Small Cap Equity 16.93%
Small Cap Equity 18.33%	Large Cap Equity 4.91%	Small Cap Equity 18.37%	U.S. Fixed Income 6.97%	High Yield -26.16%	Developed ex-U.S. Equity 33.67%	High Yield 15.06%	Large Cap Equity 15.06%	Small Cap Equity 15.06%	High Yield 15.06%	Small Cap Equity 15.06%	Real Estate 0.79%	Emerging Market Equity 11.19%	Small Cap Equity 14.65%	Global Fixed Income -2.15%	Real Estate 21.91%	Global Fixed Income 10.11%	Developed ex-U.S. Equity 12.62%	Developed ex-U.S. Equity -14.29%	High Yield 13.44%
Global ex-U.S. Fixed 12.54%	Small Cap Equity 4.55%	Large Cap Equity 15.79%	Large Cap Equity 5.49%	Small Cap Equity -33.79%	Small Cap Equity 27.17%	Large Cap Equity 15.06%	Cash Equivalent 11.13%	Large Cap Equity 15.06%	Real Estate 10.88%	High Yield 2.74%	Developed ex-U.S. Equity -4.41%	Real Estate 2.75%	Global Fixed Income 10.36%	Large Cap Equity -5.63%	Emerging Market Equity 14.32%	Developed ex-U.S. Equity 7.59%	High Yield 5.28%	Large Cap Equity -18.11%	Emerging Market Equity 9.83%
High Yield 11.13%	Cash Equivalent 3.07%	High Yield 11.85%	Cash Equivalent 5.00%	Large Cap Equity -37.00%	Large Cap Equity 26.47%	Developed ex-U.S. Equity 8.95%	Small Cap Equity -4.18%	High Yield 15.81%	Cash Equivalent 0.07%	Cash Equivalent 0.03%	Small Cap Equity -4.41%	Developed ex-U.S. Equity 2.75%	Real Estate 10.36%	Real Estate -5.63%	High Yield 14.32%	U.S. Fixed Income 7.51%	Cash Equivalent 0.05%	Global ex-U.S. Fixed -18.70%	Real Estate 9.67%
Large Cap Equity 10.88%	High Yield 2.74%	Global ex-U.S. Fixed 8.16%	High Yield 1.87%	Developed ex-U.S. Equity -43.56%	Global ex-U.S. Fixed 7.53%	U.S. Fixed Income 6.54%	Real Estate -6.46%	U.S. Fixed Income 4.21%	U.S. Fixed Income -2.02%	Emerging Market Equity -2.19%	High Yield -4.47%	U.S. Fixed Income 2.65%	High Yield 7.50%	Small Cap Equity -11.01%	U.S. Fixed Income 8.72%	High Yield 7.11%	U.S. Fixed Income -1.54%	Emerging Market Equity -20.09%	Global ex-U.S. Fixed 5.72%
U.S. Fixed Income 4.34%	U.S. Fixed Income 2.43%	Cash Equivalent 4.85%	Small Cap Equity -1.57%	Real Estate -48.21%	U.S. Fixed Income 5.93%	Global ex-U.S. Fixed 4.95%	Developed ex-U.S. Equity -12.21%	Global ex-U.S. Fixed 4.09%	Emerging Market Equity -2.60%	Global ex-U.S. Fixed -3.09%	Global ex-U.S. Fixed -6.02%	Global ex-U.S. Fixed 1.49%	U.S. Fixed Income 3.54%	Developed ex-U.S. Equity -14.09%	Global ex-U.S. Fixed 5.09%	Cash Equivalent 0.67%	Emerging Market Equity -2.54%	Small Cap Equity -20.44%	U.S. Fixed Income 5.72%
Cash Equivalent 1.33%	Global ex-U.S. Fixed 8.65%	U.S. Fixed Income 4.33%	Real Estate 7.98%	Emerging Market Equity 55.34%	Cash Equivalent 0.21%	Cash Equivalent 0.13%	Emerging Market Equity -18.42%	Cash Equivalent 0.11%	Global ex-U.S. Fixed -3.08%	Developed ex-U.S. Equity -4.32%	Emerging Market Equity -14.92%	Cash Equivalent 0.33%	Cash Equivalent 0.86%	Emerging Market Equity -14.57%	Cash Equivalent 2.28%	Real Estate -9.04%	Global ex-U.S. Fixed -7.05%	Real Estate -25.10%	Cash Equivalent 5.01%

Q15: For how many years is the worst of 2023, better than the best of other years?

A: 3 times (15%) of the years, 2023 Cash Eq > the best of other years, 2015, 2018 2022

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Source: Callan Institute, AAll Analysis

3. HYINC DIVERSIFICATION – 20 yr LEADERS/LOSERS

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2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023			
Real Estate 37.96%	Emerging Market Equity 34.00%	Real Estate 42.12%	Emerging Market Equity 39.38%	U.S. Fixed Income 5.24%	Emerging Market Equity 78.51%	Small Cap Equity 26.85%	U.S. Fixed Income 7.84%	Real Estate 27.73%	Small Cap Equity 38.82%	Real Estate 15.02%	Large Cap Equity 1.38%	Small Cap Equity 21.31%	Emerging Market Equity 37.28%	Cash Equivalent 1.87%	Large Cap Equity 31.49%	Small Cap Equity 19.96%	Large Cap Equity 28.71%	Cash Equivalent 1.46%	Large Cap Equity 26.29%			
Emerging Market Equity 25.55%	Real Estate 15.35%	Emerging Market Equity 32.17%	Developed ex-U.S. Equity 12.44%	Global ex-U.S. Fixed Income 4.39%	High Yield 58.21%	Real Estate 19.63%	High Yield 4.98%	Emerging Market Equity 18.23%	Large Cap Equity 32.39%	Large Cap Equity 13.69%	U.S. Fixed Income 0.55%	High Yield 17.13%	Developed ex-U.S. Equity 24.21%	U.S. Fixed Income 0.01%	Small Cap Equity 25.52%	Large Cap Equity 18.40%	Real Estate 26.09%	High Yield -11.19%	Developed ex-U.S. Equity 17.94%			
Developed ex-U.S. Equity 20.38%	Developed ex-U.S. Equity 14.47%	Developed ex-U.S. Equity 25.71%	Q17: Based this table should you aspire to picking the top 2 or 3 asset classes?																Small Cap Equity 16.93%			
Small Cap Equity 18.33%	Large Cap Equity 4.91%	Small Cap Equity 18.37%	U.S. Fixed Income 6.97%	A: Top 3 could work ... except in down years																High Yield 13.44%		
Global ex-U.S. Fixed Income 12.54%	Small Cap Equity 4.55%	Large Cap Equity 15.79%	High Yield 11.13%	Asset Rank in Last 20 Years		Cash Equivalent	Developed ex US Equity		Emerging Market Equity		Global ex US Fixed		High Yield		Large Cap Equity	Real Estate	Small Cap Equity	US Fixed Income		High Yield -18.11%	Large Cap Equity 9.83%	Emerging Market Equity 5.72%
High Yield 11.13%	Cash Equivalent 3.07%	High Yield 11.85%		1st	2		3	4	1	4	3	3	4	2	4	1	2	2	2	2	2	2
				2nd		6	2	2	1	2	1	2	1	2	2	2	2	2	2	2	2	2
				3rd	4	9	9	3	5	9	8	7	6	6	6	6	6	6	6	6	6	6
No of Top 3 Finishes																						
Large Cap Equity 10.88%	High Yield 2.74%	Global ex-U.S. Fixed Income 8.16%	High Yield 1.87%	No of Last 2 Finishes		10	3	6	9	-	-	4	2	6	Emerging Market Equity -20.09%	Global ex-U.S. Fixed Income 5.72%						
U.S. Fixed Income 4.34%	U.S. Fixed Income 2.43%	Cash Equivalent 4.85%	Small Cap Equity -1.57%	Real Estate -48.21%	U.S. Fixed Income 5.93%	Global ex-U.S. Fixed Income 4.95%	Developed ex-U.S. Equity -12.21%	Global ex-U.S. Fixed Income 4.09%	Emerging Market Equity -2.60%	Global ex-U.S. Fixed Income -3.09%	Global ex-U.S. Fixed Income -6.02%	Global ex-U.S. Fixed Income 1.49%	U.S. Fixed Income 3.54%	Developed ex-U.S. Equity -14.09%	Global ex-U.S. Fixed Income 5.09%	Cash Equivalent 0.67%	Emerging Market Equity -2.54%	Small Cap Equity -20.44%	U.S. Fixed Income 5.53%			
Cash Equivalent 1.33%	Global ex-U.S. Fixed Income -8.65%	U.S. Fixed Income 4.33%	Real Estate -7.39%	Emerging Market Equity -53.33%	Cash Equivalent 0.21%	Cash Equivalent 0.13%	Emerging Market Equity -18.42%	Cash Equivalent 0.11%	Global ex-U.S. Fixed Income -3.08%	Developed ex-U.S. Equity -4.32%	Emerging Market Equity -14.92%	Cash Equivalent 0.33%	Cash Equivalent 0.86%	Emerging Market Equity -14.57%	Cash Equivalent 2.28%	Real Estate -9.04%	Global ex-U.S. Fixed Income -7.05%	Real Estate -25.10%	Cash Equivalent 5.01%			
Source: Callan Institute																						

Source: Callan Institute

3. HYINC DIVERSIFICATION – 10 & 20-year LEADERS

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2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Real Estate	Emerging Market Equity	Real Estate	Emerging Market Equity	U.S. Fixed Income	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Real Estate	Small Cap Equity	Real Estate	Large Cap Equity	Small Cap Equity	Emerging Market Equity	Cash Equivalent	Large Cap Equity	Small Cap Equity	Large Cap Equity	Cash Equivalent	Large Cap Equity
37.96%	34.00%	42.12%	39.38%	5.24%	78.51%	26.85%	7.84%	27.73%	38.82%	15.02%	1.38%	21.31%	37.28%	1.87%	31.49%	19.96%	28.71%	1.46%	26.29%
Emerging Market Equity	Real Estate	Emerging Market Equity	Developed ex-U.S. Equity	U.S. Fixed Income	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Real Estate	Small Cap Equity	Real Estate	Large Cap Equity	Small Cap Equity	Emerging Market Equity	Cash Equivalent	Large Cap Equity	Small Cap Equity	Large Cap Equity	Cash Equivalent	Large Cap Equity
25.55%	15.35%	32.17%	12.44%	4.39%	58.21%	19.63%	4.98%	18.23%	32.39%	13.69%	0.55%	17.13%	24.21%	0.01%	25.52%	18.40%	26.09%	-11.19%	17.94%
Developed ex-U.S. Equity	Developed ex-U.S. Equity	Developed ex-U.S. Equity	Global ex-U.S. Fixed Income	Cash Equivalent	Real Estate	Emerging Market Equity	Developed ex-U.S. Fixed Income	Emerging Market Equity	Developed ex-U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed Income	High Yield	Emerging Market Equity	High Yield	Developed ex-U.S. Equity	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Small Cap Equity
20.38%	14.47%	25.71%	11.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%
Small Cap Equity	Large Cap Equity	Small Cap Equity	U.S. Fixed Income	Cash Equivalent	Real Estate	Emerging Market Equity	Developed ex-U.S. Fixed Income	Emerging Market Equity	Developed ex-U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed Income	High Yield	Emerging Market Equity	High Yield	Developed ex-U.S. Equity	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Small Cap Equity
18.33%	4.91%	18.37%	6.97%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%
Global ex-U.S. Fixed Income	Small Cap Equity	Large Cap Equity	Large Cap Equity	Cash Equivalent	Real Estate	Emerging Market Equity	Developed ex-U.S. Fixed Income	Emerging Market Equity	Developed ex-U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed Income	High Yield	Emerging Market Equity	High Yield	Developed ex-U.S. Equity	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Small Cap Equity
12.54%	4.55%	15.79%	5.49%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%
High Yield	Cash Equivalent	High Yield	Cash Equivalent	Cash Equivalent	Real Estate	Emerging Market Equity	Developed ex-U.S. Fixed Income	Emerging Market Equity	Developed ex-U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed Income	High Yield	Emerging Market Equity	High Yield	Developed ex-U.S. Equity	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Small Cap Equity
11.13%	3.07%	11.85%	5.00%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%
Large Cap Equity	High Yield	Global ex-U.S. Fixed Income	High Yield	Cash Equivalent	Real Estate	Emerging Market Equity	Developed ex-U.S. Fixed Income	Emerging Market Equity	Developed ex-U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed Income	High Yield	Emerging Market Equity	High Yield	Developed ex-U.S. Equity	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Small Cap Equity
10.88%	2.74%	8.16%	1.87%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%
U.S. Fixed Income	U.S. Fixed Income	Cash Equivalent	Small Cap Equity	Real Estate	U.S. Fixed Income	Global ex-U.S. Fixed Income	Developed ex-U.S. Equity	Global ex-U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	Global ex-U.S. Fixed Income	U.S. Fixed Income	Developed ex-U.S. Equity	Global ex-U.S. Fixed Income	Cash Equivalent	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income
4.34%	2.43%	4.85%	-1.57%	-48.21%	5.93%	4.95%	-12.21%	4.09%	-2.60%	-3.09%	-6.02%	1.49%	3.54%	-14.09%	5.09%	0.67%	-2.54%	-20.44%	5.53%
Cash Equivalent	Global ex-U.S. Fixed Income	U.S. Fixed Income	Real Estate	Emerging Market Equity	Cash Equivalent	Cash Equivalent	Emerging Market Equity	Cash Equivalent	Global ex-U.S. Fixed Income	Developed ex-U.S. Equity	Emerging Market Equity	Cash Equivalent	Cash Equivalent	Emerging Market Equity	Cash Equivalent	Real Estate	Global ex-U.S. Fixed Income	Real Estate	Cash Equivalent
1.33%	-8.65%	4.35%	-7.39%	-55.33%	0.21%	0.13%	-18.42%	0.11%	-3.08%	-4.32%	-14.92%	0.33%	0.86%	-14.57%	2.28%	-9.04%	-7.05%	-25.10%	5.01%

Q18: How do assets compare based on long term returns (max, avg, med, min) and volatility?

A: US Large Cap Equity best in 10 and 20 year data

Callan Inst Annual Data;	Cash Equivalent	Developed ex US Equity	Emerging Market Equity	Global ex US Fixed	High Yield	Large Cap Equity	Real Estate	Small Cap Equity	US Fixed Income
10 YoY Return - Max	5.0%	24.2%	37.3%	10.5%	17.1%	31.5%	26.1%	25.5%	8.7%
Average	1.3%	5.2%	4.1%	-0.4%	4.9%	14.0%	4.7%	8.2%	2.0%
Median	0.8%	5.2%	3.9%	-0.3%	6.2%	16.0%	6.9%	14.7%	3.1%
Min	0.0%	-14.3%	-20.1%	-18.7%	-11.2%	-18.1%	-25.0%	-20.4%	-13.0%
Stdev	1.5%	14.1%	18.2%	9.0%	9.0%	15.1%	15.4%	15.4%	6.2%
20 YoY Return - Max	5.0%	33.7%	78.5%	12.5%	58.2%	31.5%	42.1%	38.8%	8.7%
Average	1.5%	7.5%	10.7%	2.1%	7.6%	10.0%	8.4%	9.7%	3.3%
Median	0.8%	12.5%	14.7%	4.4%	7.3%	12.8%	10.0%	15.6%	4.3%
Min	0.0%	-43.6%	-53.3%	-18.7%	-26.2%	-37.0%	-48.2%	-33.8%	-13.0%
Stdev	1.7%	18.3%	28.4%	8.0%	15.8%	16.2%	22.2%	17.8%	4.9%
Cum 20 year Return	30%	149%	213%	41%	152%	200%	168%	193%	66%

Source: Callan Institute

3. HyInc DIVERSIFICATION – SIM Risk/Reward – Global Asset Correlations

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Efficient Frontier Assets

#	Asset	Expected Return	Standard Deviation	Sharpe Ratio	Min. Weight	Max. Weight
1	US Large Cap	10.74%	14.83%	0.624	5.00%	30.00%
2	US Small Cap	10.67%	19.19%	0.478	5.00%	30.00%
3	Intl Developed ex-US Market	7.20%	17.05%	0.334	5.00%	30.00%
4	Emerging Markets	8.70%	20.59%	0.350	5.00%	30.00%
5	Corporate Bonds	4.19%	8.01%	0.336	5.00%	30.00%
6	High Yield Corporate Bonds	5.69%	7.96%	0.527	5.00%	30.00%
7	Global Bonds (Unhedged)	2.73%	7.21%	0.171	5.00%	39.00%
8	REIT	9.75%	22.14%	0.373	5.00%	30.00%
9	Short Term Treasury	1.83%	1.74%	0.190	5.00%	30.00%

Results based on historical returns. Expected return is the annualized monthly arithmetic mean return. Ex-ante Sharpe Ratio calculated using U.S. 3-Month Treasury Bill Rate returns as the risk-free rate.

Q19. Given risk return properties and correlations, what is the asset mix on the efficient frontier?

Asset Correlations

Asset	US Large Cap	US Small Cap	Intl Developed ex-US Market	Emerging Markets	Corporate Bonds	High Yield Corporate Bonds	Global Bonds (Unhedged)	REIT	Short Term Treasury
US Large Cap	1.00	0.92	0.88	0.73	0.43	0.73	0.56	0.74	-0.06
US Small Cap	0.92	1.00	0.84	0.73	0.39	0.73	0.52	0.77	-0.11
Intl Developed ex-US Market	0.88	0.84	1.00	0.86	0.49	0.74	0.71	0.70	0.01
Emerging Markets	0.73	0.73	0.86	1.00	0.42	0.68	0.69	0.60	0.00
Corporate Bonds	0.43	0.39	0.49	0.42	1.00	0.63	0.79	0.52	0.54
High Yield Corporate Bonds	0.73	0.73	0.74	0.68	0.63	1.00	0.72	0.70	0.08
Global Bonds (Unhedged)	0.56	0.52	0.71	0.69	0.79	0.72	1.00	0.58	0.47
REIT	0.74	0.77	0.70	0.60	0.52	0.70	0.58	1.00	0.08
Short Term Treasury	-0.06	-0.11	0.01	0.00	0.54	0.08	0.47	0.08	1.00

Based on monthly returns from Jan 2004 to Jun 2024

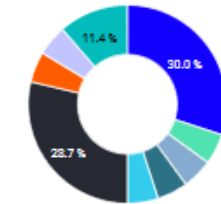
Source: Portfolio Visualizer

3. HyInc DIVERSIFICATION READY – Global Asset Efficient Frontier

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Max Sharpe Ratio Portfolio

Asset Class	Allocation	Allocation
US Large Cap	30.00%	50.41%
US Small Cap	5.00%	5.00%
Intl Developed ex-US Market	5.00%	5.00%
Emerging Markets	5.00%	5.00%
Corporate Bonds	5.00%	5.00%
High Yield Corporate Bonds	28.65%	14.59%
Global Bonds (Unhedged)	5.00%	5.00%
REIT	5.00%	5.00%
Short Term Treasury	11.35%	5.00%



US Large Cap
 US Small Cap
 Intl Developed ex-US Market
 Emerging Markets
 Corporate Bonds
 High Yield Corporate Bonds
 Global Bonds (Unhedged)
 REIT
 Short Term Treasury

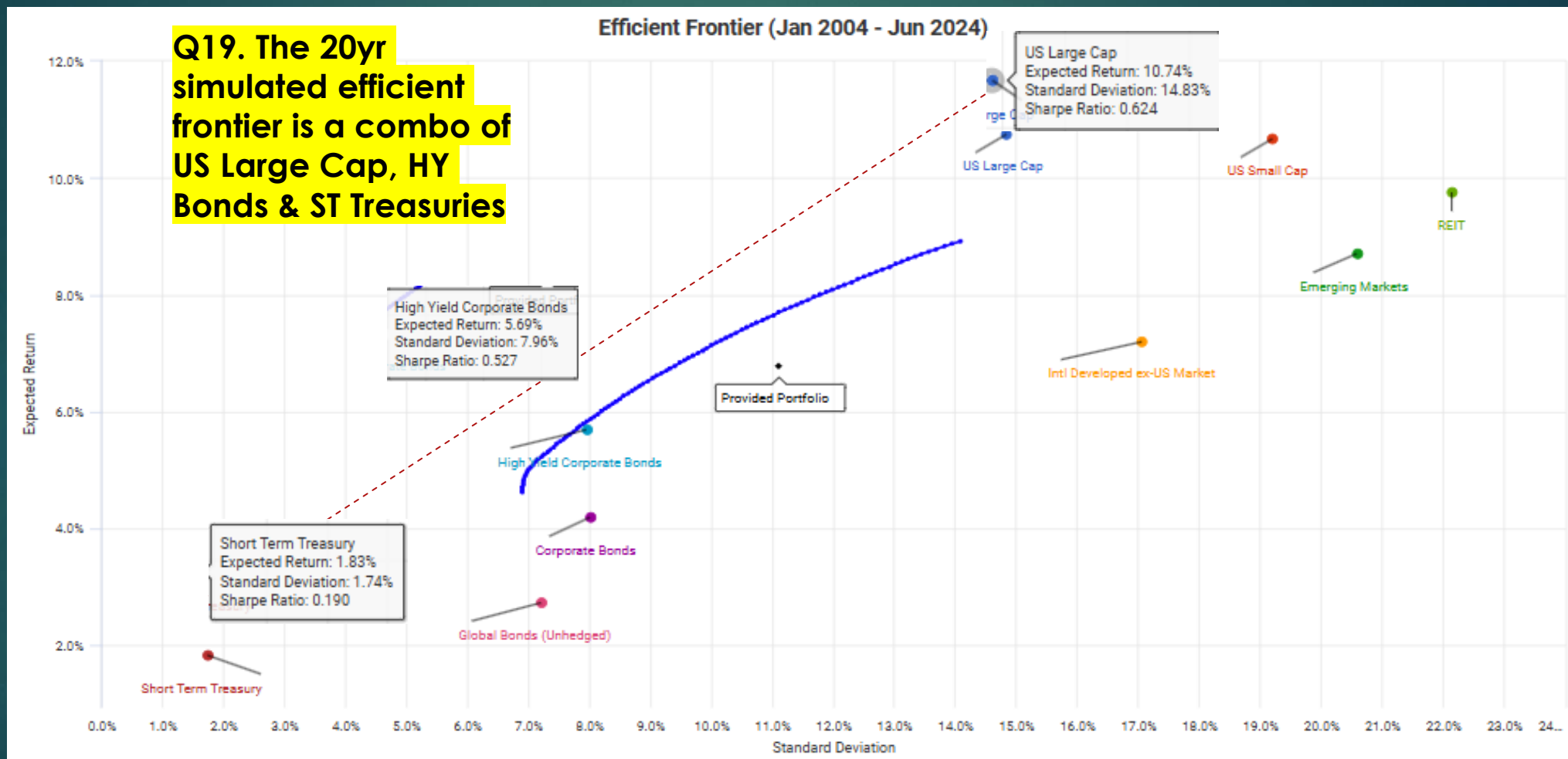
20. Allocation constraints drive assets from HY Bonds & ST Treasuries to Large Cap
20yr model

Performance Summary

Portfolio	Expected Return	Standard Deviation	Sharpe Ratio
Provided Portfolio	6.78%	11.10%	0.48
Max Sharpe Ratio Portfolio	7.22%	10.16%	0.56
Max Sharpe Ratio Portfolio	8.31%	12.21%	0.57

3. HyInc DIVERSIFICATION READY: – Global Asset Correlations

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Source: Portfolio Visualizer

3. NEXT STEPS

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▶ ASSETS

- ▶ - Correlations & Calibration
- ▶ - Addition of International to mix

▶ OPTIMIZATION

- ▶ - LT Income (vs Return)
- ▶ - LT Stress Testing (10yr)
- ▶ HIGH GRADE (better to best)
- ▶ - Equities Dividend Drill
- ▶ - w Option premia
- ▶ - Fixed Income – Duration vs Credit



Appendix

A - Disclosure & Disclaimer

B - Sources – Information, Data, Toolkits

C - Hylnc Objectives, Analytic Sequence

Appendix A – Income Sig – Disclosure & Disclaimer

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ADVISOR STATUS

- We are not investment advisors.

THE FUTURE IS NOT PREDICTABLE ... but RHYMES?

- Pursuant to the provisions of Rule 206(4)-1 of the Investment Advisors Act of 1940, all attendees should recognize that recommendations implied or made, may or may not duplicate the performance based on historical analysis.

SOURCES

- The contents of this presentation have been compiled from original and published sources believed to be reliable, but accuracy or completeness is not guaranteed.

Appendix B – Income Sig Data Sources

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- Dr. Ed Yardeni, Yardeni.com (EY)
- Dr. Torston Slok – The Apollo Economist (TS)
- JP Morgan Analytics – Q4 2023 Outlook (JPM)
- Simulations – Assets, ETFs, Tickers – Raffiliates & Portfolio Visualizer

AAll Houston Speakers+:

- Sumgrowth.com, Scott Juds - Algorithmic Sector Surfer
- DeltaIM.com, Delta Investment Management, Nick Atkeson
- RGBCapitalGroup.com, Rob Bernstein, AAll San Diego
- CandorAssetAdvisors.com, Bill Hawes, AAll San Antonio
- Aeromir.com, Wayne Klump, SW Portfolio
- This Week in Charts – Charlie Bilello

Appendix C – IncSig – Hybrid-Income

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▶ OBJECTIVES

- Preserve Principal, Maintain Income, Sustain Portfolio
- Monthly Income via Dividends, Options ... & Price Δ

ANALYTIC SEQUENCE

▶ Assets

- Simulate Return, Risk, Performance of Asset Classes

▶ Constraints

- Constrain Assets via Forward Outlook

▶ Positions

- Select ETF's, Tickers in $\frac{1}{2}$ of Industry Benchmark(s);
- 1st etfs or mfunds, 2nd Position - Company's
- Morningstar >3 or C+
- Rank Order Selection via Dividend & Option Income;
- Dividend a f(Cash Flow, Net Equity)
- Company Risk Adjusted Returns, Drawdowns
- Momentum -> Entry/Exit – ETF, equity, options

QUESTIONS & CONCERNS