

Capital:	LonePine 13F	\$ 22,797,967,356
	USD	22,797,967,356

GICS Sector	Contribution to		Gross	Net	Risk-adj Net	Beta-wtd Net	Port Vol
	Long	Short					
Consumer Discretionary	45%	0%	45%	45%	49%	44%	45%
Consumer Staples	6%	0%	6%	6%	8%	4%	7%
Energy	4%	0%	4%	4%	9%	7%	7%
Financials	3%	0%	3%	3%	3%	2%	2%
Health Care	3%	0%	3%	3%	4%	3%	3%
Industrials	3%	0%	3%	3%	3%	2%	2%
Information Technology	31%	0%	31%	31%	31%	35%	28%
Materials	3%	0%	3%	3%	3%	3%	3%
Real Estate	3%	0%	3%	3%	3%	2%	3%
Telecommunication Services	0%	0%	0%	0%	0%	0%	0%
Utilities	0%	0%	0%	0%	0%	0%	0%
Other							
Total	100%	0%	100%	100%	113%	102%	100%

Exp Vol Stats:

	Port Vol	SPX Vol
Annual	13%	11%
Monthly	3.9%	3.1%
Daily	0.8%	0.7%

VaR Stats:

	Loss Freq	Loss Est
1 day a month		-1.7%
1 month a year		-6.4%

Note: loss est based on hybrid dist (75% normal, 25% worst-case);
potential loss est, worse than or equal to, indicated level.

Historical Stress Testing:

Episode	Period	Hypothetical Port Return	S&P 500 INDEX SPX Return
GFC Implosion: Fall 2008	08/28/08 - 11/20/08	-43.4%	-41.8%
Credit Downgrade: Summer 2011	05/21/01 - 09/21/01	-16.0%	-17.2%
Oil Troubles: Winter 2015/2016	11/03/15 - 02/11/16	-13.9%	-12.7%

Salient Nominal Expo Stats:

"Top 5" Long Stock Expo	25%
"Top 10" Long Stock Expo	44%
# Long Stocks >= 5%	2
Avg Long Stock Expo	2.4%
"Top 5" Short Stock Expo	0%
"Top 10" Short Stock Expo	0%
# Short Stocks <= -3%	0
Avg Short Stock Expo	0.0%
"Top 10" Gross Stock Expo	44%
"Top 20" Gross Stock Expo	73%
# Stocks	41
# Long Stocks	41
# Short Stocks	0
Gross Expo Wtd-Avg Mkt Cap	\$ 95,840
Long Expo Wtd-Avg Mkt Cap	\$ 95,840
Short Expo Wtd-Avg Mkt Cap	\$ -
Simple Median Mkt Cap	\$ 25,859

Expo Dist by Factor Spectra:

Fundamental Factor	Bottom Quintile		Top Quintile	
	Long	Short	Long	Short
Market Cap*	1%	0%	17%	0%
Volatility	8%	0%	21%	0%
Dividend Yield	57%	0%	4%	0%
LT Px MOM	42%	0%	7%	0%
Analyst Buy Reco	5%	0%	49%	0%
EVA Spread (ROIC - WACC)	13%	0%	24%	0%
P/Sales	8%	0%	46%	0%
China Growth	35%	0%	8%	0%

* discreet buckets

LT Px Change:

(vs High 3m)		(vs Low 3m)	
% Change		% Change	
TV US -25%	DLTR US 22%		
LULU US -27%	COMM US 22%		

Trailing 1mo Alpha:

1mo Alpha Flag	1mo Alpha Flag
DLTR US 15%	ADS GR -12%
COMM US 12%	FB US -12%
	FLT US -19%
	ATVI US -18%
	BABA US -14%
	TV US -20%
	HDB US -14%
	330 HK -12%
	HCA US -11%

Liquidity:

FirmWide Wtd Avg Liq = 6d			
Days	Remaining \$Gross Expo	Remaining %Gross Expo	% Reduction
-	\$ 22,797,967,356	100%	0%
10	\$ 5,854,477,475	26%	74%
20	\$ 1,625,874,206	7%	93%
30	\$ 455,880,648	2%	98%
40	\$ 300,942,044	1%	99%
50	\$ 279,688,031	1%	99%
100	\$ 201,422,936	1%	99%
250	\$ 155,736,691	1%	99%

Remaining gross exposure & liquidation over time (20% participation)

Good house, bad block? SPX Sector:

SPX Sector	% Change vs.		% Change vs.	
	Mov-Avg 1M	Trailing 1M	High 1M	Low 1M
S&P 500 INDEX	2%	4%	-1%	6%
Consumer Discretionary	3%	5%	-1%	7%
Consumer Staples	0%	-3%	-3%	2%
Energy	2%	3%	-2%	5%
Financials	5%	12%	-1%	14%
Health Care	0%	1%	-4%	4%
Industrials	4%	9%	-1%	10%
Information Technology	1%	0%	0%	4%
Materials	3%	5%	0%	6%
Real Estate	0%	-1%	-3%	2%
Telecommunication Services	6%	6%	0%	10%
Utilities	1%	-1%	-3%	4%

Capital:	LonePine13F	\$	22,797,967,356
		USD	22,797,967,356

Long	100%
Short	0%
Gross	100%
Net	100%
Risk-adj Net	113%
Beta-wtd Net	102%

100%

Item	Ticker	Nominal Expo	Imp vol Risk Ratio	Trad Beta	Contribution to Port Vol	Short Name
1	CHTR US	6.2%	1.3	0.8	8%	CHARTER COMMUN-A
2	DLTR US	6.0%	0.9	1.0	5%	DOLLAR TREE INC
3	AMZN US	4.3%	1.0	1.1	4%	AMAZON.COM INC
4	EBAY US	4.2%	1.0	0.9	4%	EBAY INC
5	ADS GR	4.0%	1.1	1.1	4%	ADIDAS AG
6	EXPE US	3.9%	1.1	1.1	4%	EXPEDIA INC
7	NKE US	3.9%	1.0	1.0	3%	NIKE INC -CL B
8	MSFT US	3.9%	0.8	1.3	3%	MICROSOFT CORP
9	PCLN US	3.8%	0.9	1.3	3%	PRICELINE GROUP
10	STZ US	3.8%	1.2	0.6	4%	CONSTELLATION-A
11	ULTA US	3.4%	1.3	0.9	4%	ULTA SALON COSME
12	FB US	3.3%	1.0	1.0	3%	FACEBOOK INC-A
13	FLT US	3.2%	1.1	1.4	3%	FLEETCOR TECHNOL
14	EA US	3.0%	1.1	0.9	3%	ELECTRONIC ARTS
15	GOOG US	2.8%	0.8	1.2	2%	ALPHABET INC-C
16	ATVI US	2.8%	1.2	1.0	3%	ACTIVISION BLIZZ
17	VMC US	2.7%	1.1	1.0	3%	VULCAN MATERIALS
18	EQIX US	2.7%	1.3	0.6	3%	EQUINIX INC
19	TDG US	2.6%	1.0	0.8	2%	TRANSDIGM GROUP
20	MNST US	2.5%	1.2	0.7	3%	MONSTER BEVERAGE
21	HLT US	2.1%	0.9	1.1	2%	HILTON WORLDWIDE
22	BABA US	2.1%	1.2	1.6	2%	ALIBABA GRP-ADR
23	ADBE US	2.1%	1.0	0.9	2%	ADOBE SYS INC
24	AVGO US	2.0%	1.3	1.4	2%	BROADCOM LTD
25	LNG US	1.9%	2.2	1.5	3%	CHENIERE ENERGY
26	YUM US	1.7%	0.8	0.9	1%	YUMI BRANDS INC
27	TV US	1.6%	1.3	1.1	2%	GRUPO TELEV-ADR
28	ICE US	1.4%	1.0	0.9	1%	INTERCONTINENTAL
29	LULU US	1.4%	2.1	0.6	3%	LULULEMON ATH
30	SHPG US	1.3%	1.4	1.3	1%	SHIRE PLC-ADR
31	WMB US	1.2%	2.1	2.2	2%	WILLIAMS COS INC
32	KMI US	1.2%	1.9	1.3	2%	KINDER MORGAN IN
33	HDB US	1.1%	1.1	0.8	1%	HDFC BANK-ADR
34	MHK US	1.0%	0.9	0.8	1%	MOHAWK INDS
35	ALGN US	1.0%	1.1	1.3	1%	ALIGN TECHNOLOGY
36	330 HK	0.9%	1.4	0.6	1%	ESPRIT HLDGS
37	V US	0.8%	0.8	0.9	1%	VISA INC-CLASS A
38	BME LN	0.7%	0.9	0.4	1%	B&M EUROPEAN
39	COMM US	0.6%	1.2	1.2	1%	COMMSCOPE HOLDIN
40	HCA US	0.5%	1.2	0.5	1%	HCA HOLDINGS INC
41	TOWR IJ	0.2%	1.4	0.1	0%	SARANA MENARA

"Top 5" Long Stock Expo	25%
"Top 10" Long Stock Expo	44%
# Long Stocks >= 5%	2
Avg Long Stock Expo	2.4%
"Top 5" Short Stock Expo	0%
"Top 10" Short Stock Expo	0%
# Short Stocks <= -3%	0
Avg Short Stock Expo	
"Top 10" Gross Stock Expo	44%
"Top 20" Gross Stock Expo	73%
# Stocks	41
# Long Stocks	41
# Short Stocks	0
Gross Expo Wtd-Avg Mkt Cap	\$ 95,840
Long Expo Wtd-Avg Mkt Cap	\$ 95,840
Short Expo Wtd-Avg Mkt Cap	
Simple Median Mkt Cap	\$ 25,859

	Port Vol	SPX Vol
Annual	13%	11%
Monthly	3.9%	3.1%
Daily	0.8%	0.7%

	Vol (% of K)	Vol (% of A)
Composite Portfolio	13%	
Long Portfolio	13%	13%
Short Portfolio	0%	
Implied Correlation		
(Long-Short Portfolio)		

	Loss Freq	Loss Est
1 day a month		-1.7%
1 month a year		-6.4%

Note: loss est based on hybrid dist (75% normal, 25% worst-case); potential loss est, worse than or equal to, indicated level.

Capital: LonePine13F	\$	22,797,967,356
	USD	22,797,967,356

Contribution to

GICS Sector	Long	Short	Gross	Net	Risk-adj Net	Beta-wtd Net	Port Vol
Consumer Discretionary	45%	0%	45%	45%	49%	44%	45%
Consumer Staples	6%		6%	6%	8%	4%	7%
Energy	4%	0%	4%	4%	9%	7%	7%
Financials	3%		3%	3%	3%	2%	2%
Health Care	3%	0%	3%	3%	4%	3%	3%
Industrials	3%		3%	3%	3%	2%	2%
Information Technology	31%	0%	31%	31%	31%	35%	28%
Materials	3%		3%	3%	3%	3%	3%
Real Estate	3%	0%	3%	3%	3%	2%	3%
Telecommunication Services	0%		0%	0%	0%	0%	0%
Utilities	0%	0%	0%	0%	0%	0%	0%
Other							
Total	100%	0%	100%	100%	113%	102%	100%

Contribution to

GICS Sector . GICS Industry Group	Long	Short	Gross	Net	Risk-adj Net	Beta-wtd Net	Port Vol
Consumer Discretionary . Automobiles & Components	0%	0%	0%	0%	0%	0%	0%
Consumer Discretionary . Consumer Durables & Apparel	10%	0%	10%	10%	12%	10%	11%
Consumer Discretionary . Consumer Services	4%	0%	4%	4%	3%	4%	3%
Consumer Discretionary . Media	8%	0%	8%	8%	10%	7%	10%
Consumer Discretionary . Retailing	23%	0%	23%	23%	24%	24%	22%
Consumer Staples . Food & Staples Retailing							
Consumer Staples . Food Beverage & Tobacco	6%		6%	6%	8%	4%	7%
Consumer Staples . Household & Personal Products							
Energy . Energy	4%	0%	4%	4%	9%	7%	7%
Financials . Banks	1%		1%	1%	1%	1%	1%
Financials . Diversified Financials	1%		1%	1%	1%	1%	1%
Financials . Insurance							
Health Care . Health Care Equipment & Servic	2%	0%	2%	2%	2%	2%	1%
Health Care . Pharmaceuticals, Biotechnology	1%	0%	1%	1%	2%	2%	1%
Industrials . Capital Goods	3%		3%	3%	3%	2%	2%
Industrials . Commercial & Professional Serv							
Industrials . Transportation							
Information Technology . Semiconductors & Semiconductor	2%	0%	2%	2%	3%	3%	2%
Information Technology . Software & Services	28%	0%	28%	28%	28%	32%	25%
Information Technology . Technology Hardware & Equipmen	1%	0%	1%	1%	1%	1%	1%
Materials . Materials	3%		3%	3%	3%	3%	3%
Real Estate . Real Estate	3%	0%	3%	3%	3%	2%	3%
Telecommunication Services . Telecommunication Services	0%		0%	0%	0%	0%	0%
Utilities . Utilities	0%	0%	0%	0%	0%	0%	0%
Consumer Discretionary . Other							
Consumer Staples . Other	0%	0%	0%	0%	0%	0%	0%
Energy . Other							
Financials . Other	0%	0%	0%	0%	0%	0%	0%
Health Care . Other							
Industrials . Other	0%	0%	0%	0%	0%	0%	0%
Information Technology . Other							
Materials . Other	0%	0%	0%	0%	0%	0%	0%
Real Estate . Other							
Telecommunication Services . Other	0%	0%	0%	0%	0%	0%	0%
Utilities . Other							
Other . Other	0%	0%	0%	0%	0%	0%	0%
Total	100%	0%	100%	100%	113%	102%	100%

Capital: LonePine13F \$ 22,797,967,356
USD 22,797,967,356

Contribution to

GICS Sector . GICS Industry Group . GICS Industry	Long	Short	Gross	Net	Risk-adj Net	Beta-wtd Net	Port Vol
Consumer Discretionary . Automobiles & Components . Auto Components							
Consumer Discretionary . Automobiles & Components . Automobiles							
Consumer Discretionary . Consumer Durables & Apparel . Household Durables	1%		1%	1%	1%	1%	1%
Consumer Discretionary . Consumer Durables & Apparel . Leisure Products							
Consumer Discretionary . Consumer Durables & Apparel . Textiles, Apparel & Luxury Goo	9%		9%	9%	11%	9%	10%
Consumer Discretionary . Consumer Services . Diversified Consumer Services							
Consumer Discretionary . Consumer Services . Hotels Restaurants & Leisure	4%		4%	4%	3%	4%	3%
Consumer Discretionary . Media . Media	8%		8%	8%	10%	7%	10%
Consumer Discretionary . Retailing . Distributors							
Consumer Discretionary . Retailing . Internet & Direct Marketing Re	12%		12%	12%	12%	14%	11%
Consumer Discretionary . Retailing . Multiline Retail	7%		7%	7%	6%	6%	6%
Consumer Discretionary . Retailing . Specialty Retail	4%		4%	4%	6%	4%	5%
Consumer Staples . Food & Staples Retailing . Food & Staples Retailing	0%	0%	0%	0%	0%	0%	0%
Consumer Staples . Food Beverage & Tobacco . Beverages	6%	0%	6%	6%	8%	4%	7%
Consumer Staples . Food Beverage & Tobacco . Food Products	0%	0%	0%	0%	0%	0%	0%
Consumer Staples . Food Beverage & Tobacco . Tobacco	0%	0%	0%	0%	0%	0%	0%
Consumer Staples . Household & Personal Products . Household Products	0%	0%	0%	0%	0%	0%	0%
Consumer Staples . Household & Personal Products . Personal Products	0%	0%	0%	0%	0%	0%	0%
Energy . Energy . Energy Equipment & Services							
Energy . Energy . Oil, Gas & Consumable Fuels	4%		4%	4%	9%	7%	7%
Financials . Banks . Banks	1%	0%	1%	1%	1%	1%	1%
Financials . Banks . Thrifts & Mortgage Finance	0%	0%	0%	0%	0%	0%	0%
Financials . Diversified Financials . Capital Markets	1%	0%	1%	1%	1%	1%	1%
Financials . Diversified Financials . Consumer Finance	0%	0%	0%	0%	0%	0%	0%
Financials . Diversified Financials . Diversified Financial Services	0%	0%	0%	0%	0%	0%	0%
Financials . Diversified Financials . Mortgage Real Estate Investmen	0%	0%	0%	0%	0%	0%	0%
Financials . Insurance . Insurance	0%	0%	0%	0%	0%	0%	0%
Health Care . Health Care Equipment & Servic . Health Care Equipment & Suppl	1%		1%	1%	1%	1%	1%
Health Care . Health Care Equipment & Servic . Health Care Providers & Servic	1%		1%	1%	1%	0%	1%
Health Care . Health Care Equipment & Servic . Health Care Technology							
Health Care . Pharmaceuticals, Biotechnology . Biotechnology	1%		1%	1%	2%	2%	1%
Health Care . Pharmaceuticals, Biotechnology . Life Sciences Tools & Services							
Health Care . Pharmaceuticals, Biotechnology . Pharmaceuticals							
Industrials . Capital Goods . Aerospace & Defense	3%	0%	3%	3%	3%	2%	2%
Industrials . Capital Goods . Building Products	0%	0%	0%	0%	0%	0%	0%
Industrials . Capital Goods . Construction & Engineering	0%	0%	0%	0%	0%	0%	0%
Industrials . Capital Goods . Electrical Equipment	0%	0%	0%	0%	0%	0%	0%
Industrials . Capital Goods . Industrial Conglomerates	0%	0%	0%	0%	0%	0%	0%
Industrials . Capital Goods . Machinery	0%	0%	0%	0%	0%	0%	0%
Industrials . Capital Goods . Trading Companies & Distributo	0%	0%	0%	0%	0%	0%	0%
Industrials . Commercial & Professional Serv . Commercial Services & Supplies	0%	0%	0%	0%	0%	0%	0%
Industrials . Commercial & Professional Serv . Professional Services	0%	0%	0%	0%	0%	0%	0%
Industrials . Transportation . Air Freight & Logistics	0%	0%	0%	0%	0%	0%	0%
Industrials . Transportation . Airlines	0%	0%	0%	0%	0%	0%	0%
Industrials . Transportation . Marine	0%	0%	0%	0%	0%	0%	0%
Industrials . Transportation . Road & Rail	0%	0%	0%	0%	0%	0%	0%
Industrials . Transportation . Transportation Infrastructure	0%	0%	0%	0%	0%	0%	0%
Information Technology . Semiconductors & Semiconductor . Semiconductors & Semiconductor	2%		2%	2%	3%	3%	2%
Information Technology . Software & Services . Internet Software & Services	12%		12%	12%	12%	14%	11%
Information Technology . Software & Services . IT Services	4%		4%	4%	4%	5%	4%
Information Technology . Software & Services . Software	12%		12%	12%	12%	13%	10%
Information Technology . Technology Hardware & Equipmen . Communications Equipment	1%		1%	1%	1%	1%	1%
Information Technology . Technology Hardware & Equipmen . Electronic Equip., Instruments							
Information Technology . Technology Hardware & Equipmen . Technology Hardware, Storage &							
Materials . Materials . Chemicals	0%	0%	0%	0%	0%	0%	0%
Materials . Materials . Construction Materials	3%	0%	3%	3%	3%	3%	3%
Materials . Materials . Containers & Packaging	0%	0%	0%	0%	0%	0%	0%
Materials . Materials . Metals & Mining	0%	0%	0%	0%	0%	0%	0%
Materials . Materials . Paper & Forest Products	0%	0%	0%	0%	0%	0%	0%
Real Estate . Real Estate . Equity Real Estate Investment	3%		3%	3%	3%	2%	3%
Real Estate . Real Estate . Real Estate Management & Devel							
Telecommunication Services . Telecommunication Services . Diversified Telecommunication	0%	0%	0%	0%	0%	0%	0%
Telecommunication Services . Telecommunication Services . Wireless Telecommunication Ser	0%	0%	0%	0%	0%	0%	0%
Utilities . Utilities . Electric Utilities							
Utilities . Utilities . Gas Utilities							
Utilities . Utilities . Independent Power and Renewabl							
Utilities . Utilities . Multi-Utilities							
Utilities . Utilities . Water Utilities							
Consumer Discretionary . Other . Other	0%	0%	0%	0%	0%	0%	0%
Consumer Staples . Other . Other							
Energy . Other . Other	0%	0%	0%	0%	0%	0%	0%
Financials . Other . Other							
Health Care . Other . Other	0%	0%	0%	0%	0%	0%	0%
Industrials . Other . Other							
Information Technology . Other . Other	0%	0%	0%	0%	0%	0%	0%
Materials . Other . Other							
Real Estate . Other . Other	0%	0%	0%	0%	0%	0%	0%
Telecommunication Services . Other . Other							
Utilities . Other . Other	0%	0%	0%	0%	0%	0%	0%
Other . Other . Other							
Total	100%	0%	100%	100%	113%	102%	100%

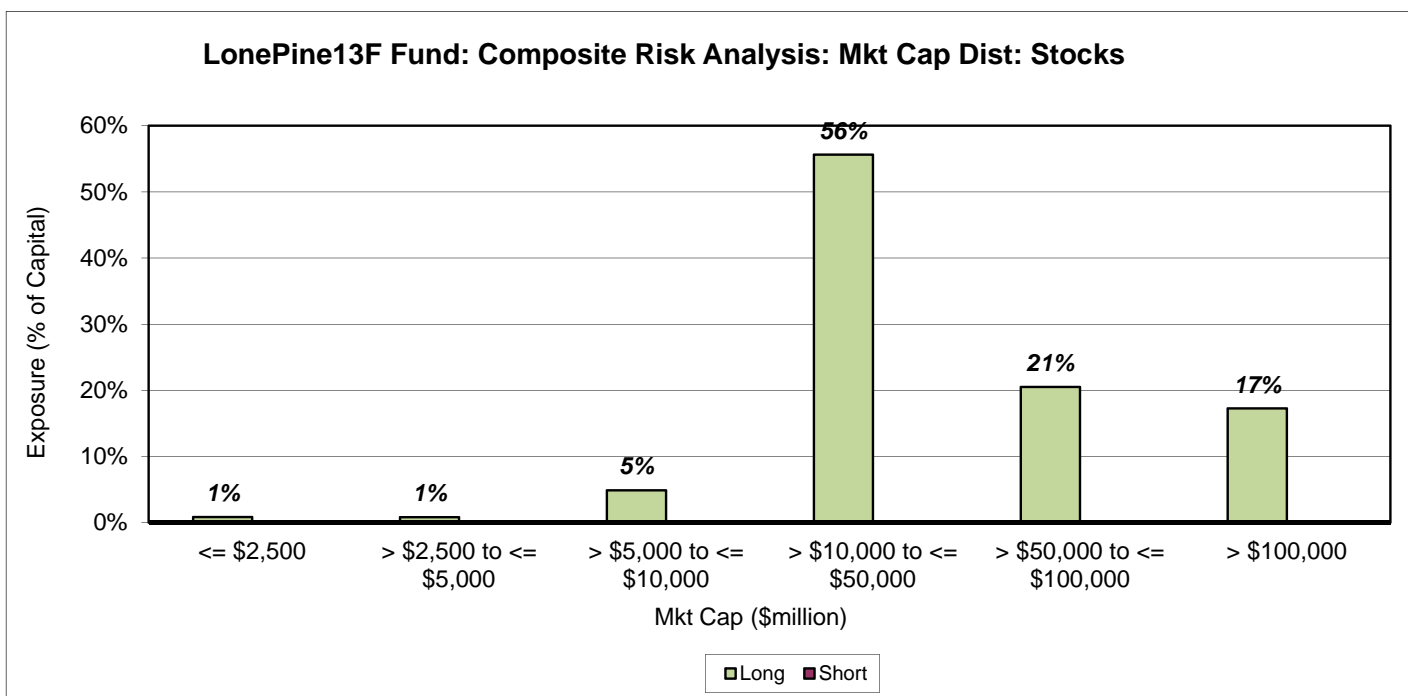
(EoD 11/28/16)

LonePine13F Fund: Composite Risk Analysis: Country Detail: Stocks

Bottom-up Risk Report LonePine13F

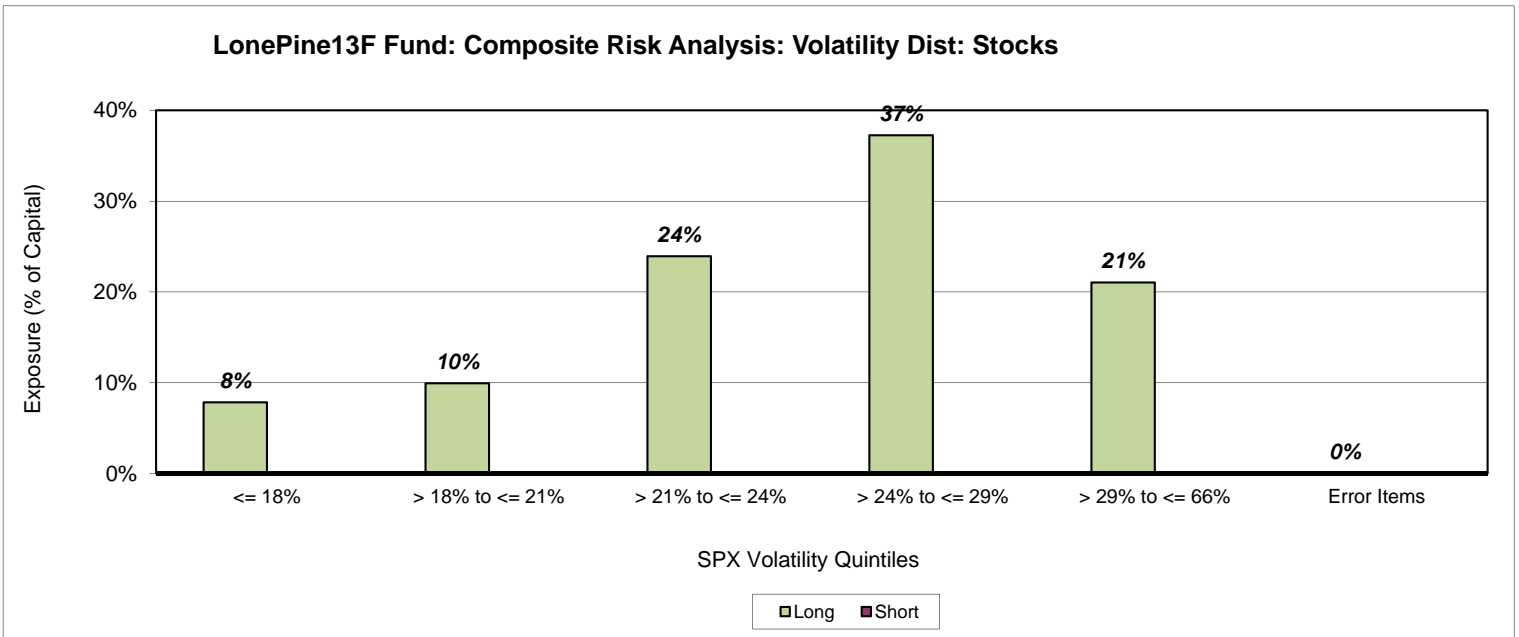
Capital: LonePine13F \$	22,797,967,356
USD	22,797,967,356

	<i>100%</i>	<i>0%</i>	<i>100%</i>	<i>100%</i>	<i>113%</i>	<i>102%</i>	<i>100%</i>
Country	Long	Short	Gross	Net	Risk-adj Net	Beta-wtd Net	Contrib to Port Vol
UNITED STATES	86%	0%	86%	86%	95%	88%	84%
GERMANY	4%	0%	4%	4%	4%	4%	4%
CANADA	1%	0%	1%	1%	3%	1%	3%
SINGAPORE	2%	0%	2%	2%	3%	3%	2%
CHINA	2%	0%	2%	2%	3%	3%	2%
MEXICO	2%	0%	2%	2%	2%	2%	2%
INDIA	1%	0%	1%	1%	1%	1%	1%
HONG KONG	1%	0%	1%	1%	1%	1%	1%
LUXEMBOURG	1%	0%	1%	1%	1%	0%	1%
INDONESIA	0%	0%	0%	0%	0%	0%	0%



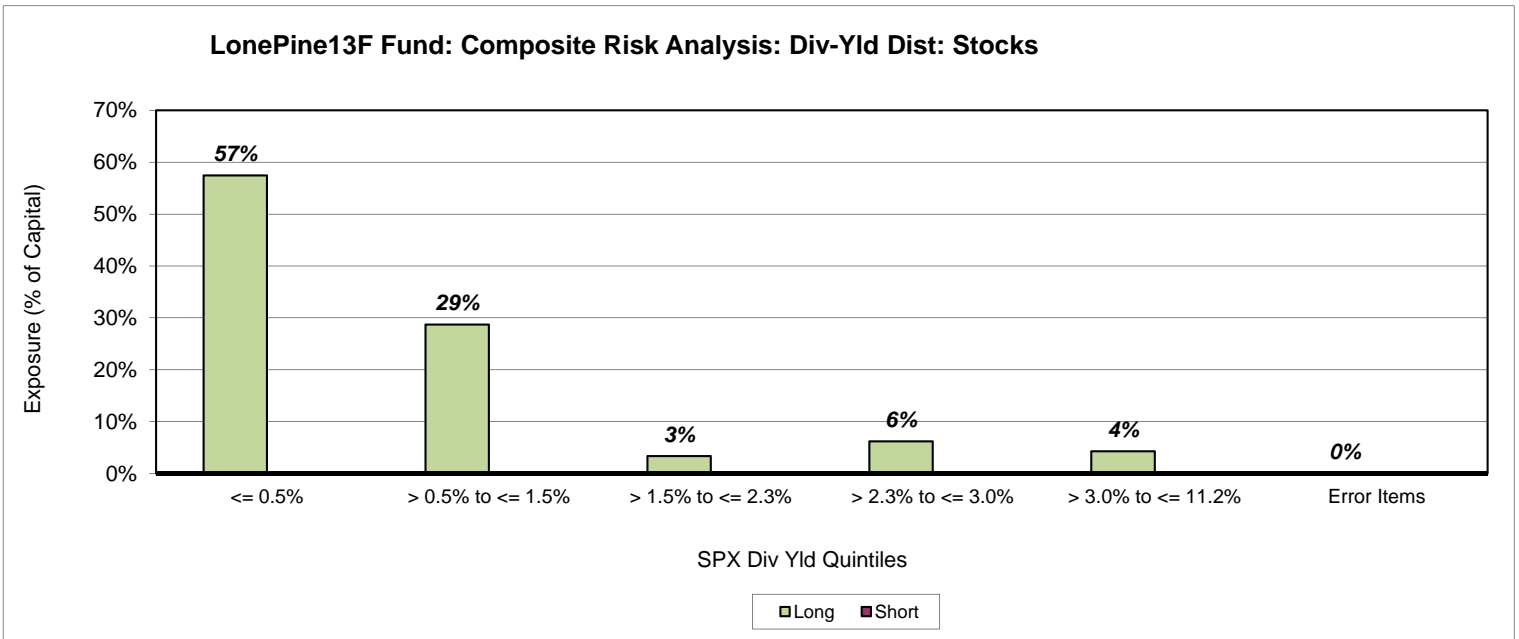
Market-Cap-Based Buckets: Stocks

	1	2	4	21	7	6.00
# of Tickers						
Item	<= \$2,500	<= \$5,000	<= \$10,000	<= \$50,000	<= \$100,000	> \$100,000
1	330 HK	BME LN	LNG US	DLTR US	CHTR US	AMZN US
2		TOWR IJ	LULU US	EBAY US	NKE US	MSFT US
3			ALGN US	ADS GR	PCLN US	FB US
4			COMM US	EXPE US	ADBE US	GOOG US
5				STZ US	AVGO US	BABA US
6				ULTA US	SHPG US	V US
7				FLT US	HDB US	
8				EA US		
9				ATVI US		
10				VMC US		
11				EQIX US		
12				TDG US		
13				MNST US		
14				HLT US		
15				YUM US		
16				TV US		
17				ICE US		
18				WMB US		
19				KMI US		
20				MHK US		
21				HCA US		



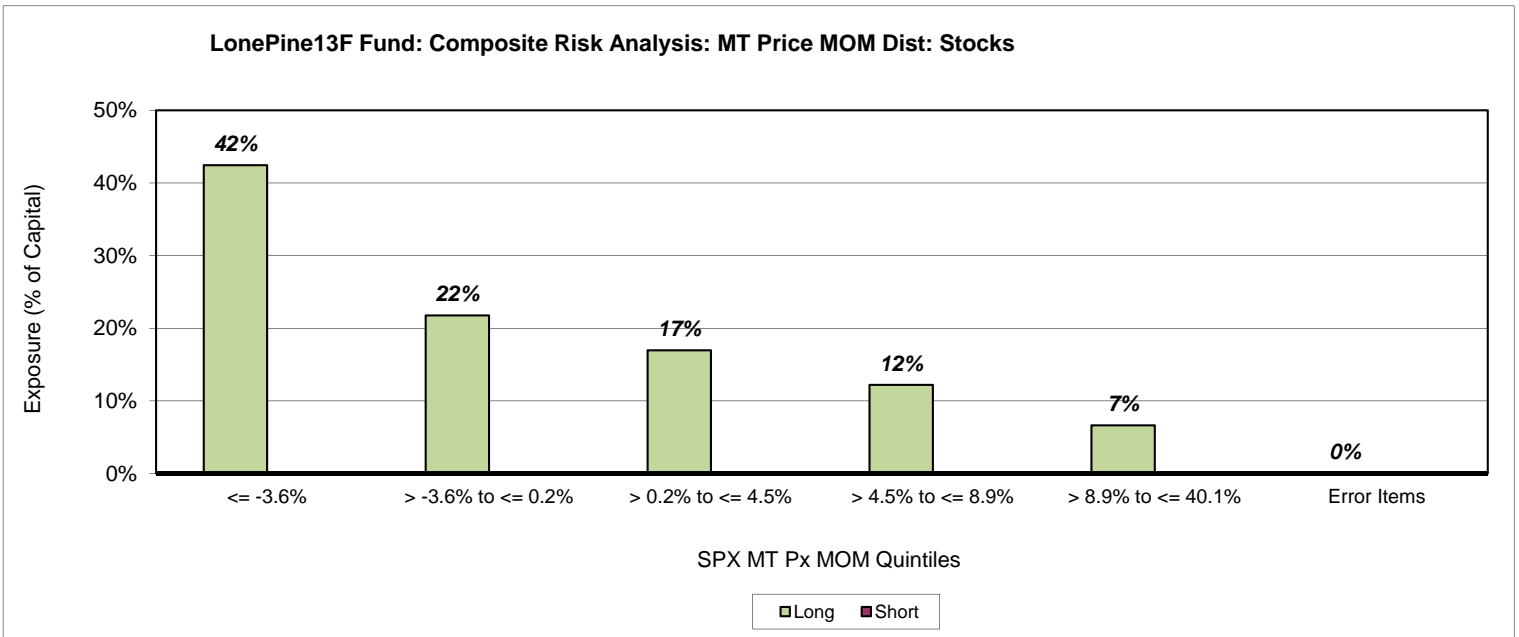
Volatility-Based Buckets: Stocks

# of Tickers	4	4	9	14	10	-
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Error Items
Item	<= 18%	<= 21%	<= 24%	<= 29%	<= 66%	
1	MSFT US	PCLN US	DLTR US	AMZN US	CHTR US	
2	YUM US	GOOG US	EBAY US	ADS GR	ULTA US	
3	ICE US	HLT US	NKE US	EXPE US	AVGO US	
4	V US	HDB US	FB US	STZ US	LNG US	
5			TDG US	FLT US	TV US	
6			ADBE US	EA US	LULU US	
7			MHK US	ATVI US	SHPG US	
8			BME LN	VMC US	WMB US	
9			TOWR IJ	EQIX US	KMI US	
10				MNST US	330 HK	
11				BABA US		
12				ALGN US		
13				COMM US		
14				HCA US		



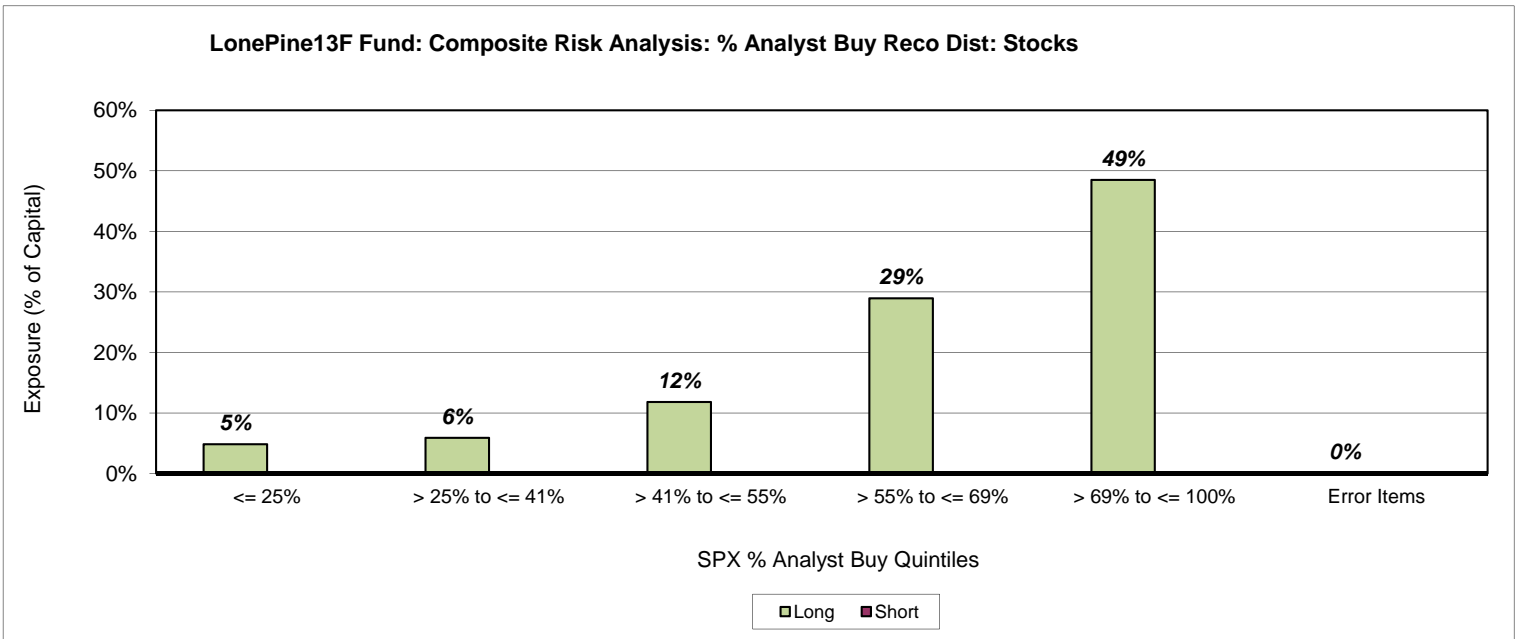
Div-Yld-Based Buckets: Stocks

# of Tickers	23	11	2	3	2	-
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Error Items
Item	<= 0.5%	<= 1.5%	<= 2.3%	<= 3.0%	<= 11.2%	
1	CHTR US	ADS GR	EQIX US	MSFT US	TDG US	
2	DLTR US	EXPE US	BME LN	WMB US	YUM US	
3	AMZN US	NKE US		KMI US		
4	EBAY US	STZ US				
5	PCLN US	ATVI US				
6	ULTA US	VMC US				
7	FB US	HLT US				
8	FLT US	AVGO US				
9	EA US	ICE US				
10	GOOG US	HDB US				
11	MNST US	V US				
12	BABA US					
13	ADBE US					
14	LNG US					
15	TV US					
16	LULU US					
17	SHPG US					
18	MHK US					
19	ALGN US					
20	330 HK					
21	COMM US					
22	HCA US					
23	TOWR IJ					



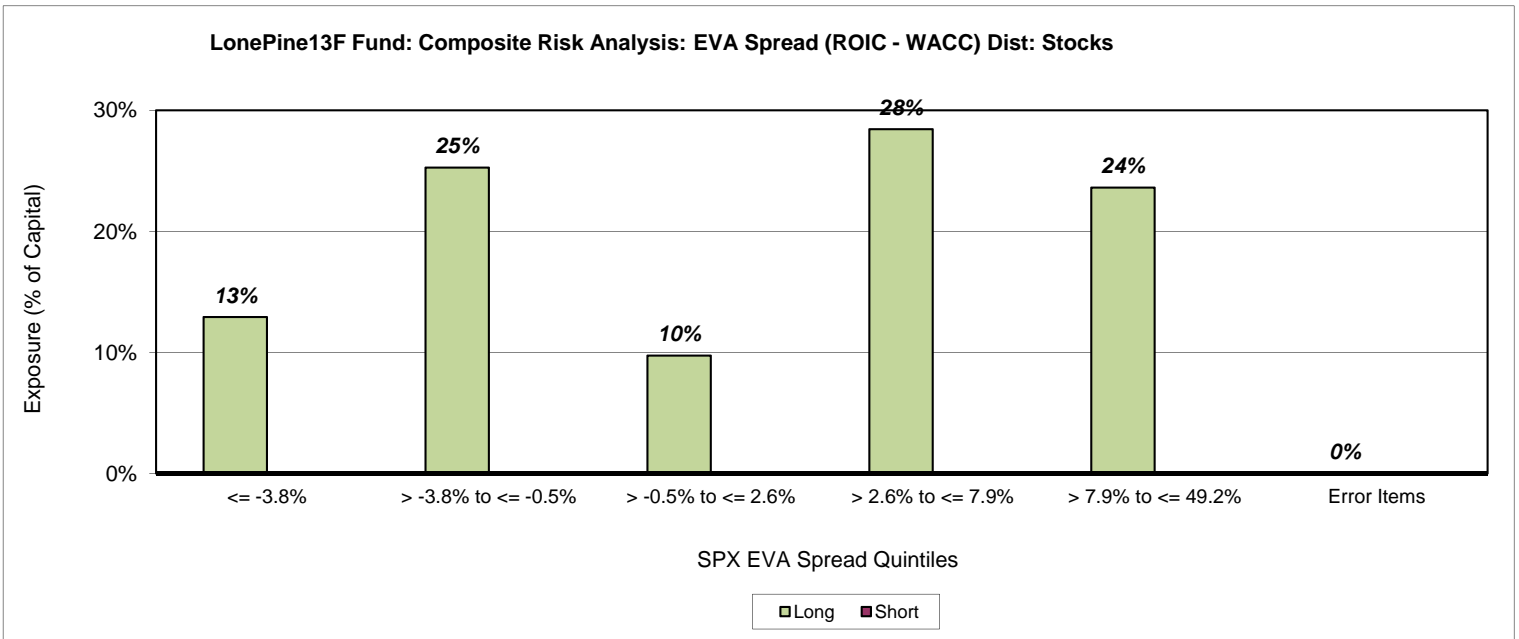
MT Px MOM-Based Buckets: Stocks

# of Tickers	18	12	5	4	2	-
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Error Items
Item	<= -3.6%	<= 0.2%	<= 4.5%	<= 8.9%	<= 40.1%	
1	EBAY US	AMZN US	CHTR US	EXPE US	DLTR US	
2	ADS GR	GOOG US	MSFT US	ULTA US	COMM US	
3	NKE US	TDG US	PCLN US	VMC US		
4	STZ US	ADBE US	AVGO US	HLT US		
5	FB US	LNG US	ALGN US			
6	FLT US	YUM US				
7	EA US	ICE US				
8	ATVI US	WMB US				
9	EQIX US	KMI US				
10	MNST US	MHK US				
11	BABA US	V US				
12	TV US	BME LN				
13	LULU US					
14	SHPG US					
15	HDB US					
16	330 HK					
17	HCA US					
18	TOWR IJ					



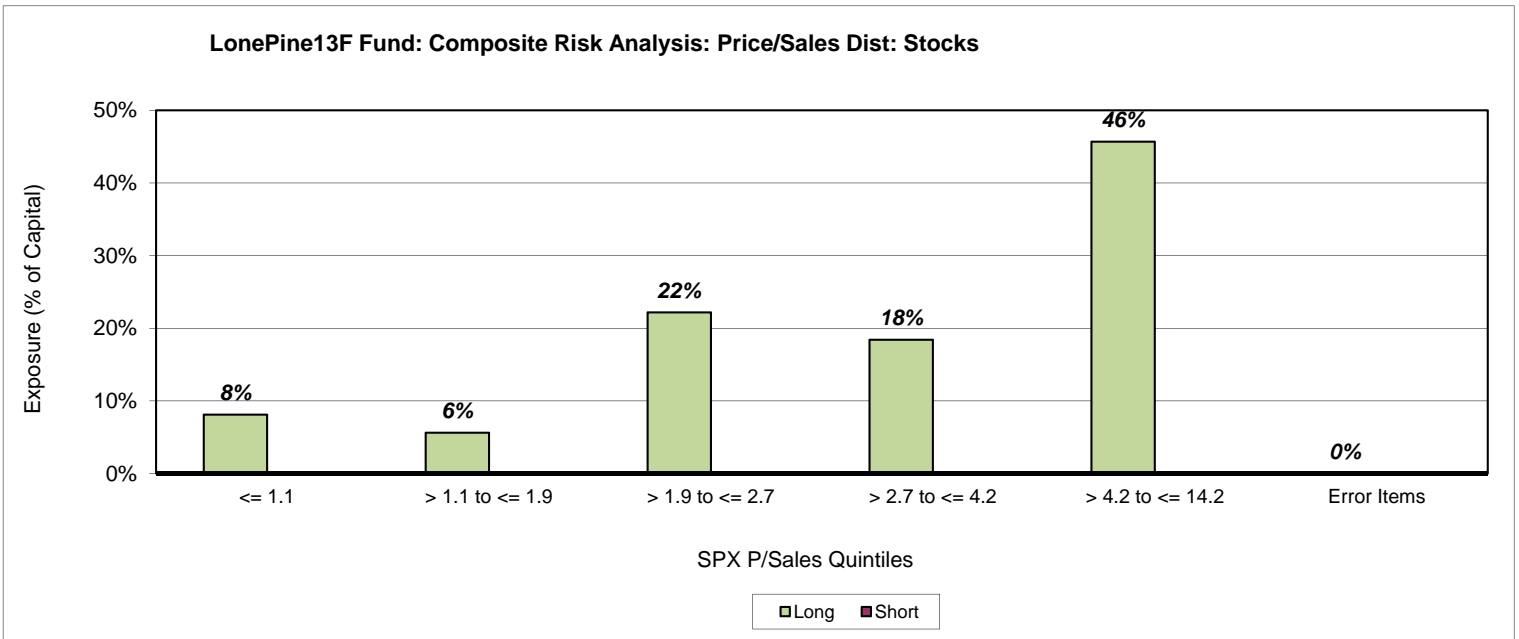
% Analyst Buy Reco-Based Buckets: Stocks

# of Tickers	2	2	4	13	20	-
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Error Items
Item	<= 25%	<= 41%	<= 55%	<= 69%	<= 100%	
1	ADS GR	EBAY US	DLTR US	NKE US	CHTR US	
2	330 HK	YUM US	VMC US	MSFT US	AMZN US	
3			TV US	STZ US	EXPE US	
4			LULU US	ULTA US	PCLN US	
5				EQIX US	FB US	
6				TDG US	FLT US	
7				MNST US	EA US	
8				HLT US	GOOG US	
9				WMB US	ATVI US	
10				KMI US	BABA US	
11				HDB US	ADBE US	
12				HCA US	AVGO US	
13				TOWR IJ	LNG US	
14					ICE US	
15					SHPG US	
16					MHK US	
17					ALGN US	
18					V US	
19					BME LN	
20					COMM US	



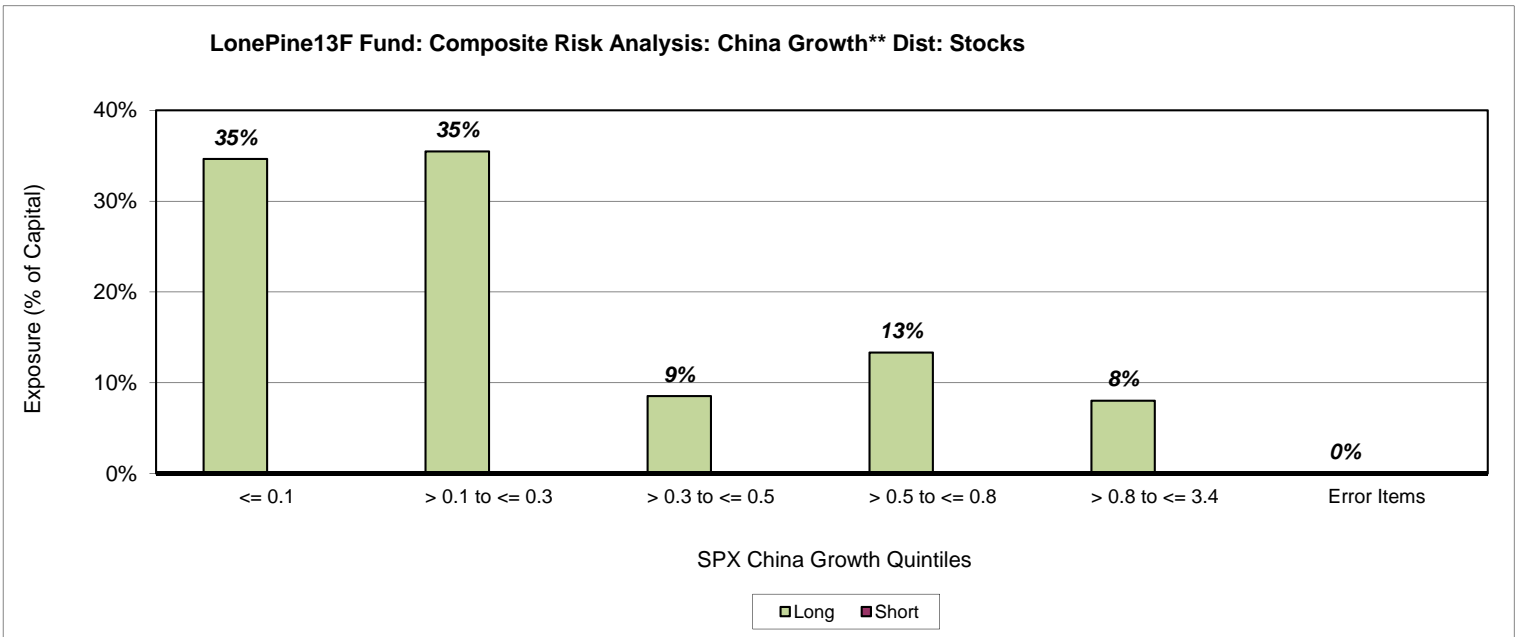
EVA Spread-Based Buckets: Stocks

# of Tickers	8	8	4	11	10	-
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Error Items
Item	<= -3.8%	<= -0.5%	<= 2.6%	<= 7.9%	<= 49.2%	
1	EXPE US	CHTR US	MSFT US	EBAY US	DLTR US	
2	AVGO US	AMZN US	HLT US	ADS GR	NKE US	
3	LNG US	FLT US	ADBE US	PCLN US	ULTA US	
4	SHPG US	ATVI US	TV US	STZ US	EA US	
5	WMB US	VMC US		FB US	MNST US	
6	KMI US	EQIX US		GOOG US	YUM US	
7	330 HK	BABA US		TDG US	LULU US	
8	COMM US	HDB US		ICE US	ALGN US	
9				MHK US	HCA US	
10				V US	TOWR IJ	
11				BME LN		



P/Sales-Based Buckets: Stocks

# of Tickers	4	3	6	8	20	-
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Error Items
Item	<= 1.1	<= 1.9	<= 2.7	<= 4.2	<= 14.2	
1	DLTR US	ADS GR	CHTR US	EBAY US	MSFT US	
2	330 HK	MHK US	AMZN US	ULTA US	PCLN US	
3	BME LN	COMM US	EXPE US	ATVI US	STZ US	
4	HCA US		NKE US	TDG US	FB US	
5			HLT US	YUM US	FLT US	
6			TV US	LULU US	EA US	
7				WMB US	GOOG US	
8				KMI US	VMC US	
9					EQIX US	
10					MNST US	
11					BABA US	
12					ADBE US	
13					AVGO US	
14					LNG US	
15					ICE US	
16					SHPG US	
17					HDB US	
18					ALGN US	
19					V US	
20					TOWR IJ	



** economic growth proxy: GS WF China growth basket

China Growth-Based Buckets: Stocks

# of Tickers	12	15	3	6	5	-
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Error Items
Item	<= 0.1	<= 0.3	<= 0.5	<= 0.8	<= 3.4	
1	DLTR US	CHTR US	ADS GR	PCLN US	FLT US	
2	NKE US	AMZN US	TDG US	VMC US	LNG US	
3	STZ US	EBAY US	AVGO US	HLT US	WMB US	
4	ULTA US	EXPE US		BABA US	KMI US	
5	EA US	MSFT US		TV US	COMM US	
6	GOOG US	FB US		330 HK		
7	ATVI US	YUM US				
8	EQIX US	ICE US				
9	MNST US	SHPG US				
10	ADBE US	HDB US				
11	LULU US	MHK US				
12	TOWR IJ	ALGN US				
13		V US				
14		BME LN				
15		HCA US				

Hypothetical pReturn	-27.7%	-6.3%	-9.9%	-19.2%	-10.6%	31.0%	23.4%	-31.5%	33.7%	-28.0%	27.9%	-43.4%	-16.0%	-10.5%	-13.9%
From	10/13/1987	2/3/1994	10/21/1997	7/19/1998	9/29/1998	10/8/1998	10/17/1999	5/21/2001	9/23/2001	5/19/2002	3/11/2003	8/28/2008	7/7/2011	5/21/2015	11/3/2015
To	10/19/1987	4/4/1994	10/27/1997	8/31/1998	10/8/1998	11/27/1998	12/31/1999	9/21/2001	12/5/2001	7/23/2002	6/17/2003	11/20/2008	8/8/2011	8/25/2015	2/11/2016

SPX Sector	Nominal Expo	Sector Beta-adj. Expo	Stock-Market	Initiation of	Asian			Bear	Post 9/11	Pavlovian	Iraq War	GFC	Credit	China	Oil Troubles:		
			Crash of	1994 Rate	Currency	Risk Premium	Risk Premium	Post LTCM	Y2K Rally:	Meltdown:	Rally: Fall	Selloff:	Rally: Spring	Implosion:	Downgrade:	Wobbles:	Winter
			1987	Hikes	Crisis	Crisis: Russia	Crisis: LTCM	Fed Easings	Winter 1999	Summer	2001	Summer	2003	Fall 2008	Summer	Summer	2015/2016
Consumer Discretionary	45%	45%	-28.5%	-8.1%	-8.7%	-20.6%	-9.6%	31.0%	20.6%	-32.8%	32.2%	-29.8%	34.4%	-46.8%	-18.3%	-7.5%	-15.7%
Consumer Staples	6%	7%	-28.5%	-6.2%	-9.1%	-16.6%	4.0%	14.4%	5.8%	-4.4%	6.9%	-19.4%	15.2%	-22.8%	-9.4%	-7.1%	-0.5%
Energy	4%	5%	-28.5%	-9.5%	-10.4%	-15.0%	-3.2%	4.1%	5.4%	-23.9%	10.1%	-25.9%	11.7%	-42.1%	-19.0%	-25.6%	-22.1%
Financials	3%	2%	-28.5%	-9.0%	-9.6%	-28.4%	-13.8%	37.7%	14.3%	-23.1%	20.1%	-27.8%	32.8%	-56.0%	-22.7%	-10.0%	-19.0%
Health Care	3%	3%	-28.5%	-12.2%	-8.7%	-16.2%	-10.6%	22.5%	0.4%	-11.0%	12.7%	-27.9%	22.6%	-31.2%	-16.0%	-9.3%	-12.1%
Industrials	3%	2%	-28.5%	-7.8%	-11.4%	-19.5%	-10.8%	26.1%	15.7%	-33.8%	26.5%	-25.0%	30.1%	-45.6%	-22.7%	-13.8%	-10.5%
Information Technology	31%	30%	-28.5%	-2.4%	-12.9%	-20.1%	-17.7%	44.6%	41.2%	-43.0%	53.0%	-31.1%	27.2%	-45.9%	-13.4%	-13.5%	-14.2%
Materials	3%	2%	-28.5%	-8.8%	-10.5%	-18.5%	-5.5%	10.6%	13.8%	-27.0%	28.5%	-22.8%	26.2%	-54.1%	-21.1%	-20.1%	-14.4%
Real Estate	3%	1%	-28.5%	-8.2%	-9.8%	-19.2%	-8.5%	24.5%	18.1%	-26.1%	21.6%	-17.6%	13.3%	-62.6%	-22.1%	-8.3%	-13.2%
Telecommunication Services	0%	0%	-28.5%	-7.9%	-6.5%	-10.2%	-0.5%	13.7%	10.4%	-12.5%	-3.6%	-34.1%	32.0%	-30.3%	-14.5%	-11.2%	7.1%
Utilities	0%	0%	-28.5%	-10.9%	-4.4%	-1.9%	5.2%	-3.4%	-2.4%	-23.9%	-7.6%	-34.6%	31.1%	-30.6%	-10.9%	-5.1%	5.2%
Other	0%	0%	-28.5%	-8.2%	-9.8%	-19.2%	-8.5%	24.5%	18.1%	-26.1%	21.6%	-27.7%	26.9%	-41.8%	-17.2%	-11.9%	-12.7%

Note: 'Other' proxied by S&P 500 IND. 100% 97%

US Systemic Risk-Premium Episodes

Hypothetical pReturn	-14.4%	-8.0%	-10.8%	-13.6%	-5.1%
From	7/1/2011	3/20/2012	7/20/2015	11/6/2015	5/27/2016
To	8/10/2011	6/1/2012	8/24/2015	2/11/2016	6/27/2016

SPX	-16.2%	-8.7%	-10.8%	-12.3%	-4.6%
d(VIX)	27%	11%	28%	14%	11%
d(UST 5y yield)	-0.86%	-0.58%	-0.34%	-0.60%	-0.41%
d(HY CDS Spread)	2.40%	1.75%	0.88%	1.56%	0.45%
JPYUSD	5.2%	7.3%	4.9%	9.5%	8.1%
Gold	20.5%	-1.6%	5.3%	14.4%	9.2%
Consumer Discretionary	-16.9%	-6.5%	-9.9%	-15.5%	-5.4%
Consumer Staples	-9.6%	-0.9%	-8.0%	1.0%	0.6%
Energy	-16.9%	-15.2%	-16.0%	-20.1%	-2.8%
Financials	-22.2%	-15.0%	-11.0%	-19.9%	-9.5%
Health Care	-16.6%	-3.1%	-10.8%	-11.2%	-3.6%
Industrials	-22.3%	-9.9%	-9.5%	-10.5%	-4.4%
Information Technology	-11.3%	-11.3%	-13.2%	-14.4%	-7.1%
Materials	-17.6%	-10.8%	-12.3%	-13.6%	-5.4%
Real Estate	-15.6%	-4.5%	-4.4%	-9.8%	1.3%
Telecommunication Services	-13.2%	4.4%	-7.9%	8.6%	6.9%
Utilities	-9.8%	3.3%	0.5%	9.5%	5.4%
Other	-16.2%	-8.7%	-10.8%	-12.3%	-4.6%

Note: 'Other' proxied by S&P 500 INDEX

				Gross Expo		Wtd Avg Adj Vol		Participation Factor			
				Gross Expo	Wtd Avg Adj Vol			20%			
				10,975,141	\$ 32.2	22,797,967,356	1,810,491	606%	30		
Item	Ticker	Shares	Px Last	Exposure	Adj Vol Avg 3m	Firm's Share of Adj Vol Avg 3m	Days to Liquidate	Short Interest Ratio (Days)	Firm's Share of Float	(as a % of Float) Short Interest	Firm's Share of Short Interest (if Short)
1	CHTR US	5,250,000	\$ 270.8	\$ 1,421,805,000	2,705,083	194%	10	5	2.5%	6%	-
2	DLTR US	15,390,000	\$ 89.6	\$ 1,378,636,200	2,893,857	532%	27	3	6.8%	4%	-
3	AMZN US	1,290,000	\$ 766.8	\$ 989,133,300	3,939,799	33%	2	1	0.3%	1%	-
4	EBAY US	33,160,000	\$ 28.6	\$ 947,381,200	10,337,152	321%	16	2	3.2%	2%	-
5	ADS GR	6,260,000	\$ 145.0	\$ 907,605,286	931,065	672%	34	Error	3.1%	Error	-
6	EXPE US	7,140,000	\$ 125.9	\$ 899,068,800	2,303,244	310%	15	6	5.9%	12%	-
7	NKE US	17,450,000	\$ 51.0	\$ 890,124,500	9,268,074	188%	9	3	1.3%	2%	-
8	MSFT US	14,510,000	\$ 60.6	\$ 879,451,100	27,374,052	53%	3	2	0.2%	1%	-
9	PCLN US	575,000	\$ 1,525.1	\$ 876,915,250	460,131	125%	6	3	1.2%	3%	-
10	STZ US	5,570,000	\$ 156.3	\$ 870,423,900	1,517,543	367%	18	3	3.5%	3%	-
11	ULTA US	2,950,000	\$ 261.6	\$ 771,720,000	904,610	326%	16	2	5.0%	3%	-
12	FB US	6,250,000	\$ 120.4	\$ 752,562,500	20,989,370	30%	1	1	0.3%	1%	-
13	FLT US	4,880,000	\$ 149.8	\$ 730,780,000	920,667	530%	27	2	5.4%	2%	-
14	EA US	8,620,000	\$ 78.7	\$ 678,652,600	3,036,972	284%	14	5	2.9%	5%	-
15	GOOG US	843,450	\$ 768.2	\$ 647,972,028	1,616,592	52%	3	1	0.3%	1%	-
16	ATVI US	17,290,000	\$ 37.4	\$ 646,127,300	9,268,886	187%	9	2	2.5%	3%	-
17	VMC US	5,000,000	\$ 124.6	\$ 622,950,000	1,459,589	343%	17	2	3.8%	2%	-
18	EQIX US	1,800,000	\$ 341.2	\$ 614,214,000	619,702	290%	15	4	2.5%	4%	-
19	TDG US	2,250,000	\$ 258.5	\$ 581,580,000	475,850	473%	24	7	4.5%	7%	-
20	MNST US	12,450,000	\$ 45.3	\$ 563,860,500	3,159,685	394%	20	3	3.0%	2%	-
21	HLT US	19,600,000	\$ 24.8	\$ 486,276,000	7,334,617	267%	13	5	3.4%	7%	-
22	BABA US	5,150,000	\$ 93.8	\$ 482,864,000	15,894,052	32%	2	7	0.2%	4%	-
23	ADBE US	4,620,000	\$ 104.5	\$ 482,790,000	2,446,316	189%	9	2	0.9%	1%	-
24	AVGO US	2,610,000	\$ 174.7	\$ 455,836,500	2,708,054	96%	5	1	0.7%	1%	-
25	LNG US	10,740,000	\$ 39.9	\$ 428,311,200	2,174,145	494%	25	8	5.5%	9%	-
26	YUM US	6,270,000	\$ 63.1	\$ 395,699,700	4,035,718	155%	8	1	1.8%	2%	-
27	TV US	18,080,000	\$ 20.6	\$ 372,990,400	2,722,325	664%	33	2	3.1%	1%	-
28	ICE US	6,040,000	\$ 54.1	\$ 326,643,200	2,949,420	205%	10	2	1.0%	1%	-
29	LULU US	5,590,000	\$ 57.2	\$ 319,803,900	2,597,992	215%	11	6	5.8%	15%	-
30	SHPG US	1,690,000	\$ 174.8	\$ 295,479,600	1,305,455	129%	6	1	0.6%	1%	-
31	WMB US	9,250,000	\$ 29.2	\$ 270,470,000	7,086,363	131%	7	3	1.2%	3%	-
32	KMI US	12,330,000	\$ 21.4	\$ 264,231,900	15,487,571	80%	4	2	0.6%	1%	-
33	HDB US	4,030,000	\$ 62.9	\$ 253,285,500	711,773	566%	28	2	0.5%	0%	-
34	MHK US	1,180,000	\$ 199.4	\$ 235,256,600	649,657	182%	9	2	1.9%	2%	-
35	ALGN US	2,440,000	\$ 95.3	\$ 232,629,600	850,193	287%	14	4	3.4%	4%	-
36	330 HK	243,470,000	\$ 0.8	\$ 196,821,148	1,852,653	13142%	657	Error	14.5%	Error	-
37	V US	2,340,000	\$ 79.1	\$ 185,047,200	9,138,642	26%	1	5	0.1%	3%	-
38	BME LN	49,910,000	\$ 3.1	\$ 154,077,660	2,949,079	1692%	85	Error	7.3%	Error	-
39	COMM US	3,790,000	\$ 35.8	\$ 135,795,700	2,233,546	170%	8	3	2.0%	4%	-
40	HCA US	1,670,000	\$ 70.4	\$ 117,634,800	3,393,345	49%	2	4	0.6%	4%	-
41	TOWR IJ	129,070,000	\$ 0.3	\$ 35,059,284	92,737	139179%	6,959	Error	1.9%	Error	-

"Flagged" Ticker Liquidity Analysis

FirmWide Wtd Avg Liq = 6d

<u>Index</u>	<u>"Flagged" Tickers</u>	<u>Firm's Share of Adj Vol Avg 3m</u>	<u>(as a % of Float)</u> <u>Short Interest >= 12%</u>	<u>Firm's Share of Short Interest</u>	<u>Days</u> <u>Short Int Ratio >= 8</u>	<u>Firm's Share of Float</u>
1	DLTR US	532%				7%
2	ADS GR	672%				
3	EXPE US					6%
4	FLT US	530%				5%
5	LNG US				8	6%
6	TV US	664%				
7	LULU US		15%	Long!		6%
8	HDB US	566%				
9	330 HK	13142%				14%
10	BME LN	1692%				7%
11	TOWR IJ	139179%				

Remaining gross exposure & liquidation over time (20% participation)

Days	Remaining \$Gross Expo	Remaining %Gross Expo	% Reduction
-	\$ 22,797,967,356	100%	0%
10	\$ 5,854,477,475	26%	74%
20	\$ 1,625,874,206	7%	93%
30	\$ 455,880,648	2%	98%
40	\$ 300,942,044	1%	99%
50	\$ 279,688,031	1%	99%
100	\$ 201,422,936	1%	99%
250	\$ 155,736,691	1%	99%

Sector Liquidity Detail

GICS Sector	% of Gross Exposure	Participation @ 100% of Adj Vol Avg 3m Wtd Avg Liquidity	% Long of Gross Expo	Long Liquidity	% Short of Gross Expo	<-- % of Gross Exposure Based Liquidity Buckets -->						
						1	2	5	10	25	50	1,392
Consumer Discretionary	45%	6	45%	6	0%	4%	17%	11%	12%	1%	0%	1%
Consumer Staples	6%	4	6%	4				6%				
Energy	4%	3	4%	3	0%	1%	1%	2%	0%	0%	0%	0%
Financials	3%	4	3%	4				1%	1%			
Health Care	3%	2	3%	2	0%	1%	1%	1%	0%	0%	0%	0%
Industrials	3%	5	3%	5				3%				
Information Technology	31%	2	31%	2	0%	15%	6%	7%	3%	0%	0%	0%
Materials	3%	3	3%	3				3%				
Real Estate	3%	3	3%	3	0%	0%	0%	3%	0%	0%	0%	0%
Telecommunication Services	0%	1,392	0%	1,392								0%
Utilities	0%		0%		0%	0%	0%	0%	0%	0%	0%	0%
Other												
Total	100%	6	100%	6	0%	21%	25%	37%	16%	1%	0%	1%

Market-Cap Liquidity Detail

Mkt Cap (\$million)	% of Gross Exposure	Participation @ 100% of Adj Vol Avg 3m Wtd Avg Liquidity	% Long of Gross Expo	Long Liquidity	% Short of Gross Expo	<-- % of Gross Exposure Based Liquidity Buckets (Days Volume) -->						
						1	2	5	10	25	50	1,392
<= \$2,500	1%	131	1%	131	0%	0%	0%	0%	0%	0%	0%	1%
> \$2,500 to <= \$5,000	1%	272	1%	272						1%		0%
> \$5,000 to <= \$10,000	5%	3	5%	3	0%	0%	1%	4%	0%	0%	0%	0%
> \$10,000 to <= \$50,000	56%	4	56%	4		2%	7%	32%	15%			
> \$50,000 to <= \$100,000	21%	2	21%	2	0%	2%	17%	0%	1%	0%	0%	0%
> \$100,000	17%	0	17%	0		17%						
Total	100%	6	100%	6	0%	21%	25%	37%	16%	1%	0%	1%

Mov Avg Term **3**
(months)

Volatility Toggle **1** **5.0%**
(1=Imp Vol; 2=Hist Vol)

Flag

"z-Score" Flag **2.0**
Mvg Avg Threshold Flag **10.0%**
"Hi/Lo" Threshold Flag **20.0%**

Item	Ticker	Px Last	Mov Avg 3m	High 3m	Low 3m	(vs Mov Avg) % Change	(vs High 3m) % Change	(vs Low 3m) % Change	Volatility Used	Exp Daily % Px Change	Short Name	z-Score
1	CHTR US	270.8	263.8	277.6	244.1	3%	-2%	11%	29%	1.4%	CHARTER COMMUN-A	
2	DLTR US	89.6	79.4	89.6	73.6	13%	0%	22%	21%	1.1%	DOLLAR TREE INC	2.0
3	AMZN US	766.8	792.3	844.4	719.1	-3%	-9%	7%	24%	1.2%	AMAZON.COM INC	
4	EBAY US	28.6	30.6	32.9	27.9	-7%	-13%	2%	22%	1.1%	EBAY INC	
5	ADS GR	137.0	147.9	159.4	131.9	-7%	-14%	4%	25%	1.2%	ADIDAS AG	
6	EXPE US	125.9	119.2	131.6	106.1	6%	-4%	19%	25%	1.2%	EXPEDIA INC	
7	NKE US	51.0	53.0	58.6	49.6	-4%	-13%	3%	22%	1.1%	NIKE INC -CL B	
8	MSFT US	60.6	58.4	61.1	56.2	4%	-1%	8%	18%	0.9%	MICROSOFT CORP	
9	PCLN US	1,525.1	1,470.4	1,578.1	1,413.9	4%	-3%	8%	20%	1.0%	PRICELINE GROUP	
10	STZ US	156.3	163.6	171.2	147.9	-4%	-9%	6%	26%	1.3%	CONSTELLATION-A	
11	ULTA US	261.6	243.9	266.1	228.2	7%	-2%	15%	31%	1.5%	ULTA SALON COSME	
12	FB US	120.4	126.5	133.3	115.1	-5%	-10%	5%	22%	1.1%	FACEBOOK INC-A	
13	FLT US	149.8	164.3	175.5	143.2	-9%	-15%	5%	25%	1.2%	FLEETCOR TECHNOL	
14	EA US	78.7	81.7	85.6	76.4	-4%	-8%	3%	25%	1.2%	ELECTRONIC ARTS	
15	GOOG US	768.2	776.3	813.1	736.1	-1%	-6%	4%	19%	0.9%	ALPHABET INC-C	
16	ATVI US	37.4	42.5	45.5	37.2	-12%	-18%	1%	27%	1.4%	ACTIVISION BLIZZ	
17	VMC US	124.6	115.7	136.0	106.5	8%	-8%	17%	27%	1.3%	VULCAN MATERIALS	
18	EQIX US	341.2	355.5	378.2	325.1	-4%	-10%	5%	26%	1.3%	EQUINIX INC	
19	TDG US	258.5	262.0	272.8	250.0	-1%	-5%	3%	22%	1.1%	TRANSDIGM GROUP	
20	MNST US	45.3	47.7	52.0	40.9	-5%	-13%	11%	26%	1.3%	MONSTER BEVERAGE	
21	HLT US	24.8	23.3	25.3	22.3	7%	-2%	12%	20%	1.0%	HILTON WORLDWIDE	
22	BABA US	93.8	100.9	109.4	89.8	-7%	-14%	4%	27%	1.3%	ALIBABA GRP-ADR	
23	ADBE US	104.5	105.7	110.8	98.8	-1%	-6%	6%	23%	1.1%	ADOBE SYS INC	
24	AVGO US	174.7	171.3	177.4	160.8	2%	-2%	9%	30%	1.5%	BROADCOM LTD	
25	LNG US	39.9	41.1	45.9	35.8	-3%	-13%	11%	38%	1.9%	CHEMIERE ENERGY	
26	YUM US	63.1	63.0	65.6	59.7	0%	-4%	6%	17%	0.9%	YUM! BRANDS INC	
27	TV US	20.6	24.9	27.7	20.4	-17%	-25%	1%	31%	1.5%	GRUPO TELEV-ADR	
28	ICE US	54.1	54.8	57.3	52.6	-1%	-6%	3%	18%	0.9%	INTERCONTINENTAL	
29	LULU US	57.2	61.0	78.3	54.6	-6%	-27%	5%	49%	2.4%	LULULEMON ATH	
30	SHPG US	174.8	186.9	206.6	164.5	-6%	-15%	6%	31%	1.5%	SHIRE PLC-ADR	
31	WMB US	29.2	29.8	31.2	27.9	-2%	-6%	5%	36%	1.8%	WILLIAMS COS INC	
32	KMI US	21.4	21.5	23.1	19.7	0%	-7%	9%	33%	1.6%	KINDER MORGAN IN	
33	HDB US	62.9	70.5	74.0	62.5	-11%	-15%	1%	21%	1.0%	HDFC BANK-ADR	
34	MHK US	199.4	199.3	216.2	177.0	0%	-8%	13%	21%	1.1%	MOHAWK INDS	
35	ALGN US	95.3	91.6	97.2	84.1	4%	-2%	13%	26%	1.3%	ALIGN TECHNOLOGY	
36	330 HK	6.3	6.6	7.0	6.1	-5%	-11%	3%	32%	1.6%	ESPRIT HLDGS	
37	V US	79.1	81.9	83.4	78.4	-3%	-5%	1%	18%	0.9%	VISA INC-CLASS A	
38	BME LN	248.7	251.6	278.0	232.5	-1%	-11%	7%	22%	1.1%	B&M EUROPEAN	
39	COMM US	35.8	31.6	36.4	29.4	13%	-1%	22%	28%	1.4%	COMMSCOPE HOLDIN	
40	HCA US	70.4	76.0	82.0	69.6	-7%	-14%	1%	29%	1.4%	HCA HOLDINGS INC	
41	TOWR IJ	3,680.0	3,839.3	4,000.0	3,600.0	-4%	-8%	2%	22%	1.1%	SARANA MENARA	

"Flagged" Ticker MT Px Change Analysis

<u>-</u>		<i>vs Mov Avg 3m</i>	<i>vs Mov Avg 3m</i>	<i>(vs High 3m)</i>	<i>(vs Low 3m)</i>	<i>Exp Daily</i>
<u>Item</u>	<u>Ticker</u>	<u>% Change</u>	<u>z-Score</u>	<u>% Change</u>	<u>% Change</u>	<u>% Px Change</u>
1	DLTR US	13%	2.0		22%	
2	ATVI US	-12%				
3	TV US	-17%		-25%		
4	LULU US			-27%		
5	HDB US	-11%				
6	COMM US	13%			22%	

+ve alpha highlight flag	10%	20%	25%	35%	35%
-ve alpha highlight flag	-10%	-20%	-25%	-35%	-35%

SPX	3.8%	2.1%	6.0%	9.9%	7.6%
------------	-------------	-------------	-------------	-------------	-------------

S&P 500 INDEX

		1mo	1mo	3mo	3mo	6mo	6mo	YTD	YTD	1yr	1yr
Item	Ticker	Return	Alpha	Return	Alpha	Return	Alpha	Return	Alpha	Return	Alpha
1	CHTR US	9%	6%	8%	6%	23%	18%	34%	26%	31%	24%
2	DLTR US	19%	15%	5%	3%	1%	-5%	16%	6%	19%	12%
3	AMZN US	-1%	-5%	0%	-3%	8%	1%	13%	3%	14%	6%
4	EBAY US	0%	-4%	-9%	-11%	17%	12%	4%	-5%	-2%	-9%
5	ADS GR	-8%	-12%	-10%	-12%	19%	12%	55%	44%	56%	47%
6	EXPE US	-4%	-8%	13%	11%	13%	6%	2%	-9%	3%	-6%
7	NKE US	-2%	-6%	-13%	-15%	-9%	-15%	-18%	-28%	-23%	-31%
8	MSFT US	2%	-3%	5%	2%	17%	10%	12%	-1%	15%	6%
9	PCLN US	3%	-1%	7%	5%	20%	12%	20%	7%	22%	13%
10	STZ US	-6%	-8%	-5%	-7%	0%	-4%	11%	5%	10%	5%
11	ULTA US	8%	5%	3%	1%	12%	7%	41%	33%	53%	46%
12	FB US	-8%	-12%	-4%	-6%	1%	-5%	15%	5%	14%	7%
13	FLT US	-14%	-19%	-10%	-13%	0%	-9%	5%	-9%	-2%	-12%
14	EA US	-1%	-4%	-3%	-5%	4%	-1%	15%	6%	14%	8%
15	GOOG US	-3%	-8%	0%	-3%	5%	-2%	1%	-11%	2%	-7%
16	ATVI US	-14%	-18%	-9%	-11%	-5%	-11%	-3%	-13%	1%	-7%
17	VMC US	11%	7%	7%	5%	6%	0%	32%	22%	21%	13%
18	EQIX US	-3%	-6%	-6%	-7%	-6%	-10%	15%	9%	18%	13%
19	TDG US	-5%	-8%	-1%	-2%	10%	6%	24%	16%	19%	13%
20	MNST US	-6%	-8%	-13%	-15%	-10%	-14%	-9%	-16%	-13%	-19%
21	HLT US	12%	8%	4%	1%	20%	14%	17%	7%	8%	0%
22	BABA US	-8%	-14%	-1%	-5%	16%	6%	15%	0%	15%	3%
23	ADBE US	-3%	-6%	2%	0%	4%	-1%	11%	2%	13%	6%
24	AVGO US	3%	-2%	-1%	-4%	15%	6%	21%	7%	36%	25%
25	LNG US	3%	-3%	-9%	-12%	22%	13%	7%	-8%	-16%	-28%
26	YUM US	2%	-1%	-1%	-3%	7%	2%	23%	14%	23%	16%
27	TV US	-16%	-20%	-25%	-27%	-24%	-31%	-24%	-35%	-28%	-37%
28	ICE US	1%	-2%	-2%	-4%	1%	-5%	7%	-2%	5%	-1%
29	LULU US	-2%	-4%	-27%	-28%	-12%	-15%	9%	3%	9%	4%
30	SHPG US	1%	-4%	-8%	-11%	-6%	-14%	-14%	-27%	-16%	-27%
31	WMB US	-1%	-10%	6%	1%	41%	28%	23%	1%	-11%	-27%
32	KMI US	5%	0%	0%	-2%	22%	14%	48%	35%	-8%	-18%
33	HDB US	-11%	-14%	-12%	-13%	-2%	-7%	3%	-5%	9%	3%
34	MHK US	8%	5%	-5%	-7%	1%	-4%	5%	-3%	3%	-3%
35	ALGN US	12%	7%	3%	0%	20%	13%	45%	32%	41%	31%
36	330 HK	-9%	-12%	-5%	-6%	1%	-3%	-27%	-33%	-27%	-32%
37	V US	-4%	-7%	-2%	-3%	0%	-6%	3%	-6%	0%	-7%
38	BME LN	5%	3%	-11%	-12%	-14%	-17%	-8%	-12%	-16%	-19%
39	COMM US	17%	12%	22%	19%	15%	8%	38%	26%	25%	16%
40	HCA US	-9%	-11%	-5%	-6%	-9%	-12%	4%	-1%	1%	-3%
41	TOWR IJ	-4%	-5%	-2%	-2%	-8%	-9%	N/A	N/A	-12%	-13%

Note: analysis based on ccy-hedged local-market returns where applicable

i) Summary:

- page 1: high-level summary risk statistics compiled from the various risk modules

ii) Exposure & volatility analysis:

- page 2: ticker-level exposure & contribution to portfolio volatility detail along with salient concentration, volatility and VaR stats
- page 3: GICS sector- and industry group-level exposure & contribution to portfolio volatility aggregation
- page 4: GICS industry-level exposure & contribution to portfolio volatility aggregation
- page 5: country-level exposure & contribution to portfolio volatility aggregation

Note:

1. risk-adjusted net is computed using forward-looking risk ratios (as opposed to traditional rear-view beta) which are based on implied stock and index volatility and hybrid correlation (intra-sector implied average correlation and inter-sector extreme-move conditional correlation; calibrated to S&P 500 implied average correlation). Philosophically, it represents a “significant”-move gauge better calibrated to market dislocations.
2. portfolio volatility, computed using implied stock volatility, is an estimate of the potential dispersion of returns around the mean return. On average, portfolio returns should fall within a +/- 1 sigma band, around the mean return, in 2 times out of 3.
3. VaR represents the minimum potential loss that the fund could experience 1-day a month and 1-month a year

iii) Exposure & ticker factor analysis:

- L/S exposure distribution along a quintile bucketing (save discreet market-cap buckets) of pertinent fundamental factors
- ticker-level dissection, by quintile bucket, for factors explored
- fundamental factors explored:
 - page 6: market cap
 - page 7: implied volatility
 - page 8: dividend yield
 - page 9: MT (3m) price momentum
 - page 10: analyst buy recommendation
 - page 11: EVA Spread (ROIC - WACC)
 - page 12: price/sales
 - page 13: China growth (GS WF growth basket as proxy)

Note : quintile threshold are determined using the full universe of S&P 500 stocks. Additionally, the fundamental factors used can adjusted to more pertinent barometers and/or modified to suit the prevailing risk regime.

iv) Historical Stress Testing:

- page 14: hypothetical portfolio and sector returns for a variety of historical stress episodes, spanning the last ~ 30y, and recent US systemic risk-premium episodes

Note : hypothetical portfolio return is computed using stock sector-based betas and realized episodic sector returns

v) Liquidity analysis:

- page 15: ticker-level guts of the report with information on days volume owned (100% of 3m ADTV); days to liquidate (assumes 20% of 3m ADTV); SI ratio (days; using 3m ADTV); SI as a % of float and firms share of short interest if short
- page 16: “flagged” ticker summary report highlighting stocks with ≥ 5 d volume owned at 100% of 3m ADTV; stocks with SI as a % of float $\geq 12\%$ and firm’s share of SI for those stocks (stocks that have a high SI as a % of float, particularly those that the firm represents a small fraction of the SI, may be vulnerable to short-covering rallies as jumpy shorts scramble to cover and opportunistic longs target to buy); stocks with SIR ≥ 8 d and stocks where firms ownership $\geq 5\%$ of float. *Note :* these thresholds can be varied and are currently set at illustrative levels.
- page 17:
 - table 1: evolution of gross exposure reduction in liquidation mode (assumes 20% participation of ADTV)
 - table 2: sector-level liquidity aggregation using fractional G/L/S and % of G in various liquidity buckets (0%-100% of ADTV, 200%-500% of ADTV etc.)
 - table 3: market cap-level liquidity aggregation using fractional G/L/S and % of G in various liquidity buckets (0%-100% of ADTV, 200%-500% of ADTV etc.)

vi) ST Px change analysis:

- page 18: ticker-level MT Px change vs. 3m mvg avg, 3m hi/lo, vol-based E(Px change) & realized 3m z-score $\geq \pm 2$ -sigma
- page 19: “flagged” ticker summary report highlighting stocks whose Px change vs. 3m mvg avg $\geq \pm 10\%$ (and/or realized 3m z-score $\geq \pm 2$ -sigma), vs. 3m hi/lo $\geq \pm 20\%$ or exp daily Px change $\geq \pm 5\%$. *Note :* these thresholds can be varied and are currently set at illustrative levels.

Note: stock-level stop-loss safeguards represent a triangulation between:

- stock-level cost-based stop-loss trigger (e.g., 20% adverse move vs. cost basis)
- stock-level portfolio-impact trigger (e.g., 100 bp portfolio-level loss)
- short-term price-change trigger (e.g., 35% drawdown vs. trailing high-water mark)

vii) Trailing alpha analysis:

- page 20: trailing stock returns and their alpha over the last 1m, 3m, 6m, YTD and 1y highlighted for alpha threshold breaches

Note: expected stock return is computed using tradition beta, SPX Index return and Fed Funds as the risk-free rate