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July 26, 2023

Nasdaq

The Next Chapter of Emerging Markets

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Content

Nasdaq

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Next Chapter of Emerging Markets

Is the Tide Turning?

Interactive Brokers Webinar

July 26, 2023

Kevin Davitt

*Head of Index Options Content,
Nasdaq*

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Index

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The Nasdaq-100® Volatility Index (Ticker Symbol: VOLQ) is calculated and administered by The Nasdaq Stock Market LLC. The Nasdaq-100 Volatility Index is a financial benchmark designed to measure changes in 30-day implied volatility of the Nasdaq-100 Index as further described in the methodology, rules and other information. VOLQ options, which are traded on Nasdaq Phlx LLC, are complicated financial products only suitable for sophisticated market participants. Market participants should put at risk only funds that they can afford to lose without affecting their lifestyles. Transacting in VOLQ options involves the risk of loss, which can be substantial and can exceed the amount of money deposited for a Nasdaq-100 Volatility Index position (except when buying options on VOLQ, in which case the potential loss is limited to the purchase price of the options).

Before transacting in VOLQ options, market participants should fully inform themselves about the Nasdaq-100 Volatility Index and the characteristics and risks of VOLQ Options. Market participants also should make sure they understand the product specifications for VOLQ Options and the methodologies for calculating and settling the Nasdaq-100 Volatility Index.



Emerging Markets (EM)

To Begin: What's an EM?



“A country that’s transitioning from a low income, often pre-industrial economy toward a modern, industrial economy with a higher standard of living.”



Emerging Markets (EM)

What's Our Focus?

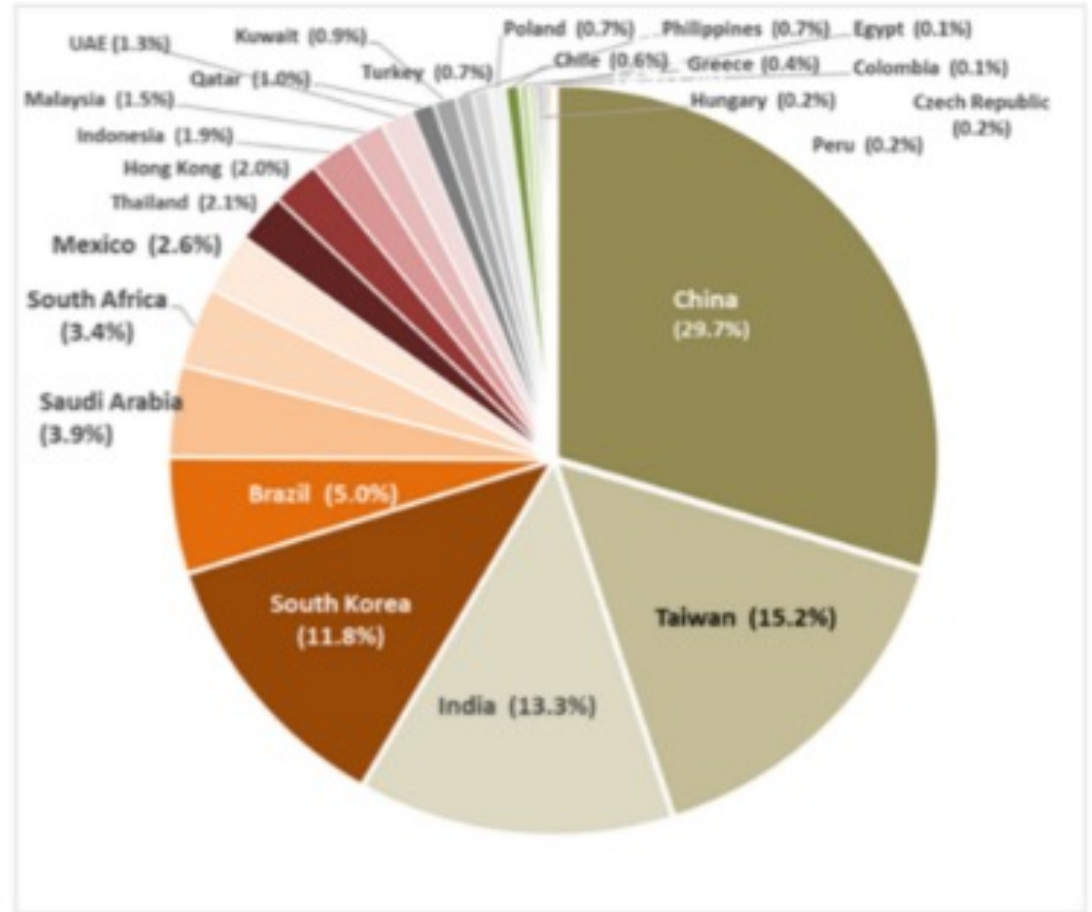
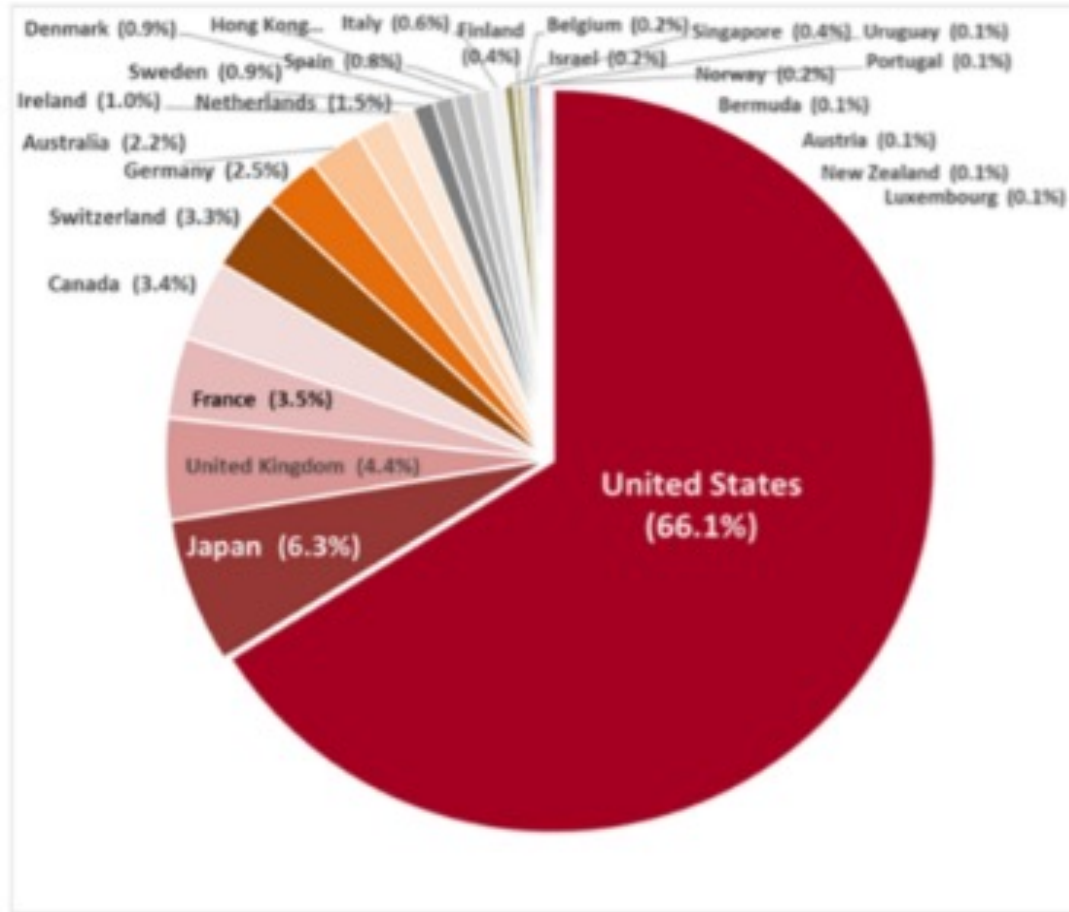


***EDUCATION >
APPLICATION & ANALYSIS***



Emerging Markets (EM)

Developed vs. Emerging

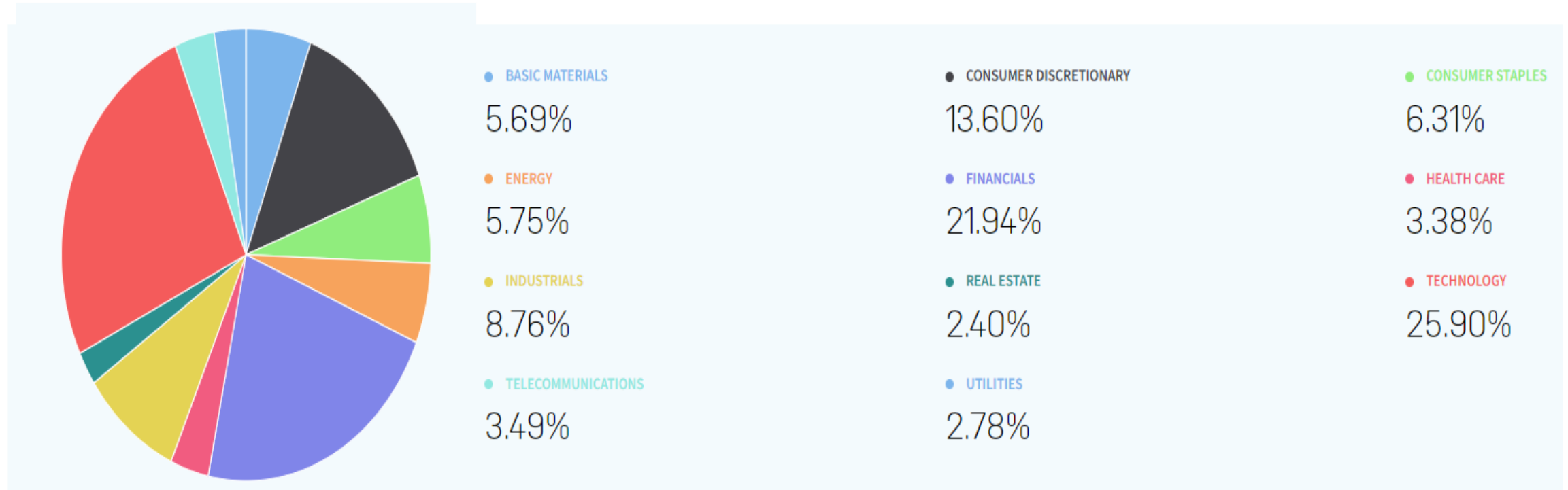


Emerging Markets (EM)

EM Sector Weights

NQEM NASDAQ EMERGING MARKETS INDEX
7/19/2023

Industry Breakdown



Source: Nasdaq

Emerging Markets (EM)

EM Top Constituents

- Where Are My EM Dollars?
 - 1877 securities
 - Asia ~75%
 - Mid East ~8%
 - Europe ~2.3%
 - Lat Am ~10%
 - Africa ~3%
 - N. America 1.7%

CODE	COUNTRY NAME
BR	Brazil
CL	Chile
CN	China
CO	Colombia
CZ	Czech Republic
EG	Egypt
HU	Hungary
ID	Indonesia
IN	India
MA	Morocco

CODE	COUNTRY NAME
MX	Mexico
MY	Malaysia
PE	Peru
PH	Philippines
PL	Poland
RU	Russia
TH	Thailand
TR	Turkey
TW	Taiwan
ZA	South Africa

TOP 10 COMPONENTS BY WEIGHT

TICKER	NAME	WEIGHT
2330	Taiwan Semicon Rg	7.61%
700	Tencent Hldg Rg	4.52%
9988	Alibaba Grp Rg	3.22%
EQRELIANCE	Reliance Inds DS	1.85%
EQHDFCBANK	HDFC Bank Rg	1.55%
EQICICIBANK	ICICI Bank Rg	1.26%
NPN	Naspers Rg-N	1.23%
3690	Meituan Rg-B	1.20%
939	China Constrct Bk-H	1.08%
EQHDFC	Housing Dev Rg	1.07%

All Information as of 06/30/2023.

Source: Nasdaq



EM Annual & Cumulative Returns

- Cliff Notes:
 - It's not been a great decade for EM
 - Despite the “emergence” of China the bulk of those gains predate 2013
 - Currency, interest rate, political and other concerns
- NQEM Methodology
 - More information ^
 - Do you believe in long term mean reversion?
 - Do you see benefit in global EM go forward exposure?

PERFORMANCE(TR Version)

ANNUAL

1 Year	5.54%
2 Year	-21.64%
3 Year	38.85%
4 Year	-7.24%
5 Year	6.47%
6 Year	7.89%
7 Year	21.55%
8 Year	-9.66%
9 Year	-3.36%
10 Year	14.27%

CUMULATIVE

1 Year	5.54%
2 Year	-17.30%
3 Year	14.83%
4 Year	6.52%
5 Year	13.41%
6 Year	22.36%
7 Year	48.73%
8 Year	34.36%
9 Year	29.84%
10 Year	48.37%

CUMULATIVE ANNUALIZED

1 Year	5.54%
2 Year	-9.06%
3 Year	4.72%
4 Year	1.59%
5 Year	2.55%
6 Year	3.42%
7 Year	5.83%
8 Year	3.76%
9 Year	2.94%
10 Year	4.02%

Source: Nasdaq



EM Vol or NDX Vol? Which is Which?

ANNUALIZED VOLATILITY(TR Version)

ANNUAL

1 Year	25.62%
2 Year	27.04%
3 Year	22.80%
4 Year	33.76%
5 Year	21.41%
6 Year	16.34%
7 Year	10.68%
8 Year	20.36%
9 Year	14.04%
10 Year	12.69%

CUMULATIVE

1 Year	25.62%
2 Year	26.37%
3 Year	25.23%
4 Year	27.61%
5 Year	26.49%
6 Year	25.08%
7 Year	23.56%
8 Year	23.18%
9 Year	22.35%
10 Year	21.58%

ANNUALIZED VOLATILITY(TR Version)

ANNUAL

1 Year	15.40%
2 Year	19.18%
3 Year	15.24%
4 Year	23.15%
5 Year	12.83%
6 Year	11.29%
7 Year	10.96%
8 Year	19.06%
9 Year	10.75%
10 Year	11.32%

CUMULATIVE

1 Year	15.40%
2 Year	17.40%
3 Year	16.75%
4 Year	18.55%
5 Year	17.56%
6 Year	16.68%
7 Year	15.99%
8 Year	16.40%
9 Year	15.87%
10 Year	15.48%

Source: Nasdaq

Source: Nasdaq



Emerging Markets (EM)

EM Vol or NDX Vol? Which is Which?

ANNUALIZED VOLATILITY(TR Version)

ANNUAL

1 Year	25.62%
2 Year	27.04%
3 Year	22.80%

CUMULATIVE

1 Year	25.62%
2 Year	26.37%
3 Year	25.23%

ANNUALIZED VOLATILITY(TR Version)

ANNUAL

1 Year	15.40%
2 Year	19.18%
3 Year	15.24%

CUMULATIVE

1 Year	15.40%
2 Year	17.40%
3 Year	16.75%

Nasdaq-100 Index®

4 Year	20.54%
5 Year	18.54%
6 Year	16.54%
7 Year	10.68%
8 Year	20.36%
9 Year	14.04%
10 Year	12.69%

4 Year	23.66%
5 Year	22.66%
6 Year	21.66%
7 Year	23.56%
8 Year	23.18%
9 Year	22.35%
10 Year	21.58%

**NASDAQ Emerging Markets Index
NQEM**

4 Year	15.24%
5 Year	14.24%
6 Year	11.29%
7 Year	10.96%
8 Year	19.06%
9 Year	10.75%
10 Year	11.32%

4 Year	16.75%
5 Year	15.75%
6 Year	16.68%
7 Year	15.99%
8 Year	16.40%
9 Year	15.87%
10 Year	15.48%

Source: Nasdaq

Source: Nasdaq



Emerging Markets (EM)

A Divergent Decade

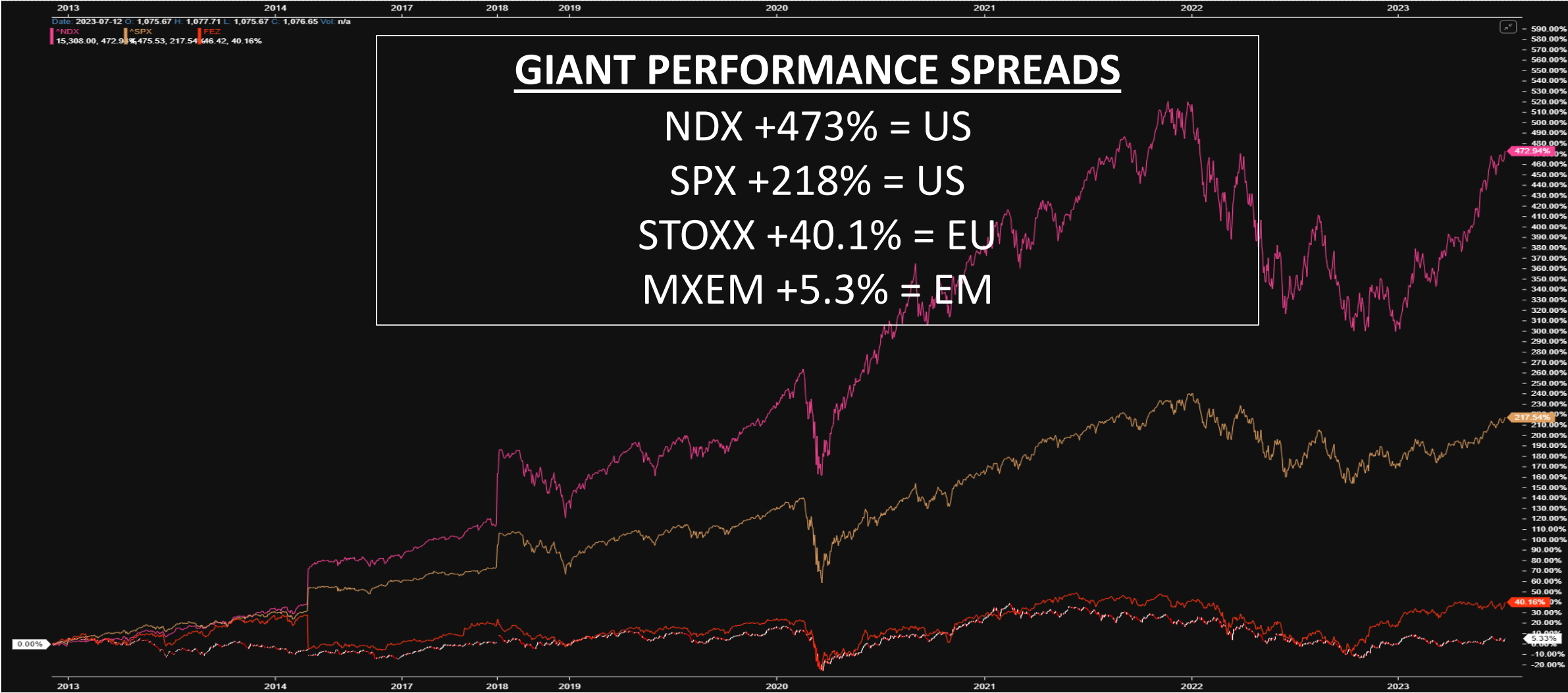
GIANT PERFORMANCE SPREADS

NDX +473% = US

SPX +218% = US

STOXX +40.1% = EU

MXEM +5.3% = EM



Emerging Markets (EM)

Europe an EM +?

DOES EM
MIRROR EUROPE?



Emerging Markets (EM)

Not for Faint of Heart

- High Vol Market
 - 1988 – 2022: Half of annual returns +/- 20% (MSCI EM)
 - Realized volatility ~2x S&P 500 over same time frame
 - Vol can yield incredible outperformance (99-07)
- Intra-EM Vol – Even Higher
 - Variety of countries considered “emerging markets”
 - 30-year avg. for worst EM (country) performance = -26%
 - 30-year avg. for best EM (country) performance = +81%

YEARS	MSCI EM	NDX	SPX
1988-1993	545.4%	156.0%	128.7%
1994-1998	-38.5%	361.0%	191.3%
1999-2007	420.1%	13.6%	37.5%
2008-2016	-11.3%	133.3%	84.5%
2017-2023	15.7%	211.6%	98.1%

Source: Bloomberg + A Wealth of Common Sense

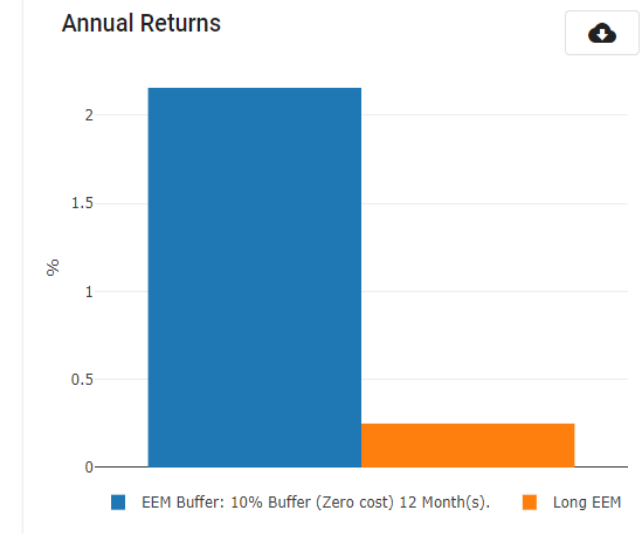
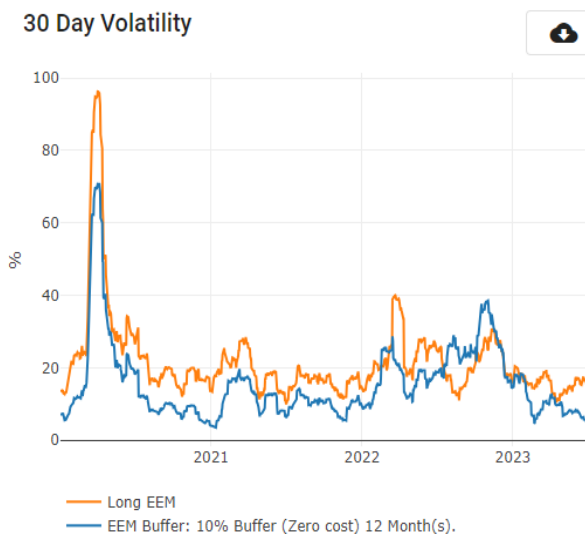
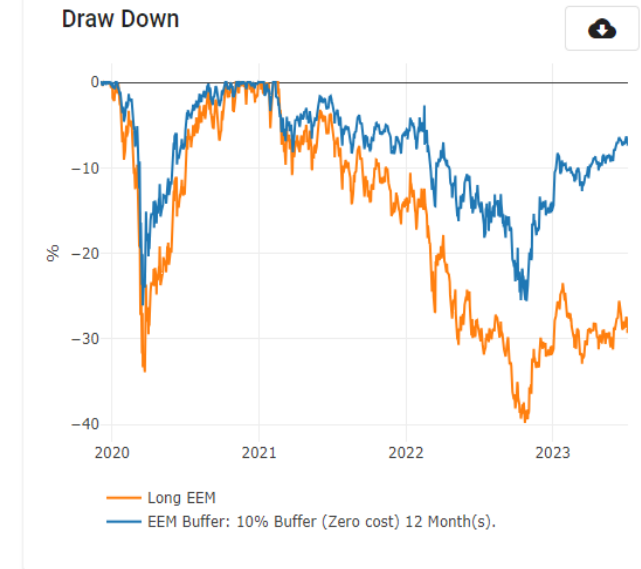
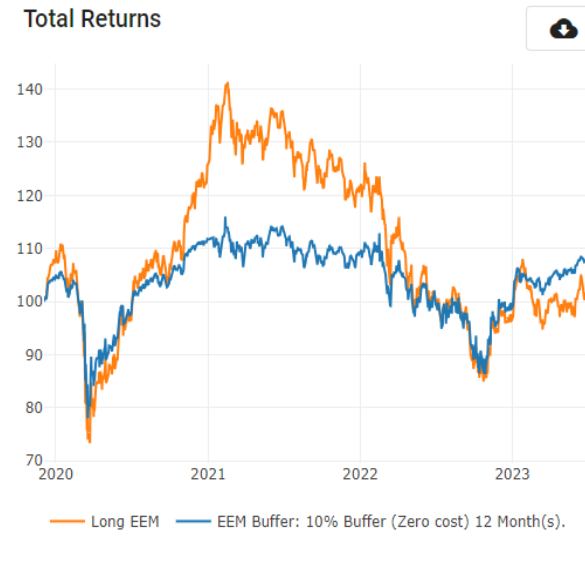


Emerging Markets (EM)

Application with Analysis

- EM with Overlay
 - Long EM Proxy v. Long + 10% Zero Cost Buffer (12M duration)
 - Long 100/90 put spread (EoY) + Short OTM call to cover cost
 - Like many buffer protect strategies available today

- Buffered Exposure
 - (Significantly) lower volatility
 - In some cases, higher annual/total return profile
 - Run any iteration using Volos back testing software

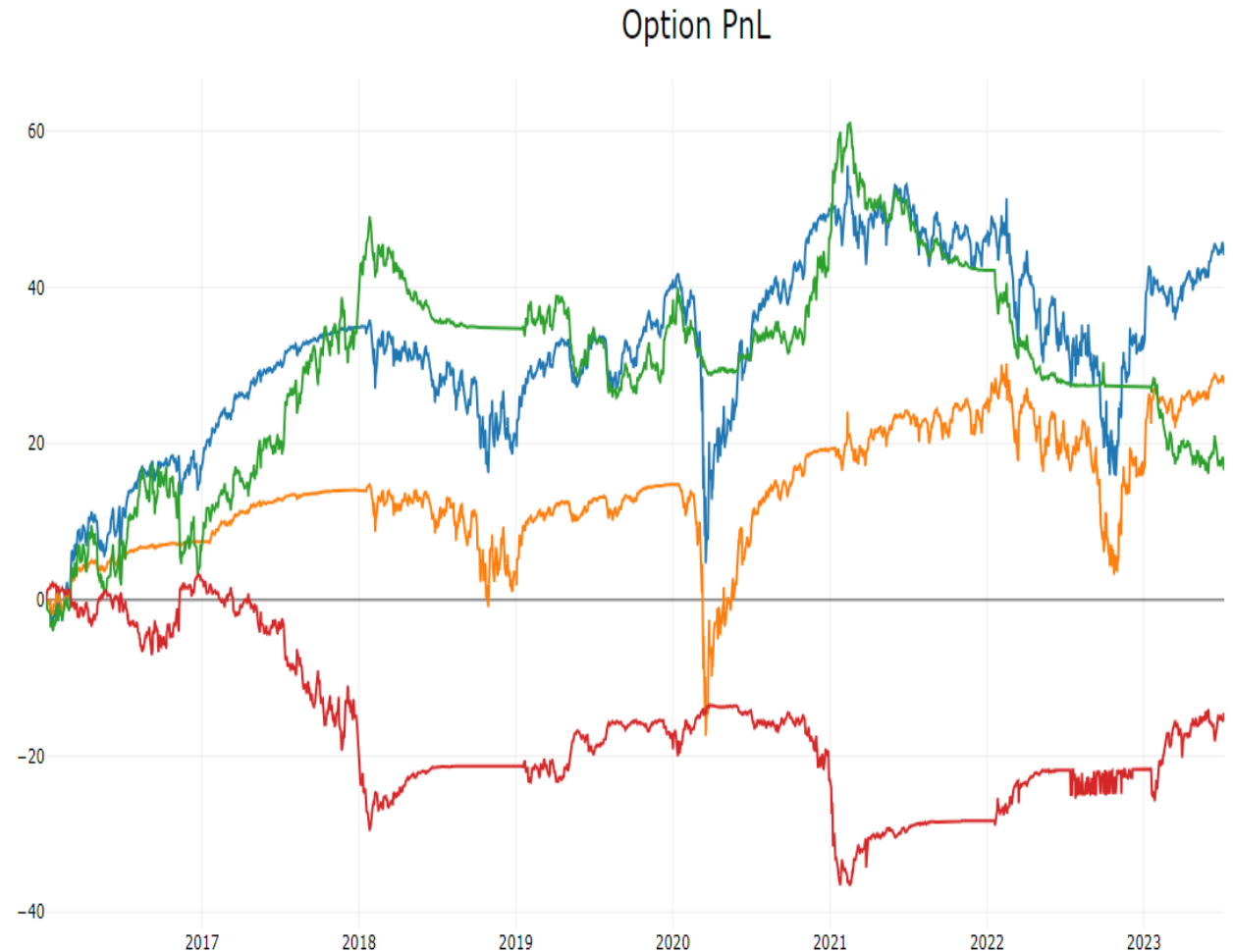
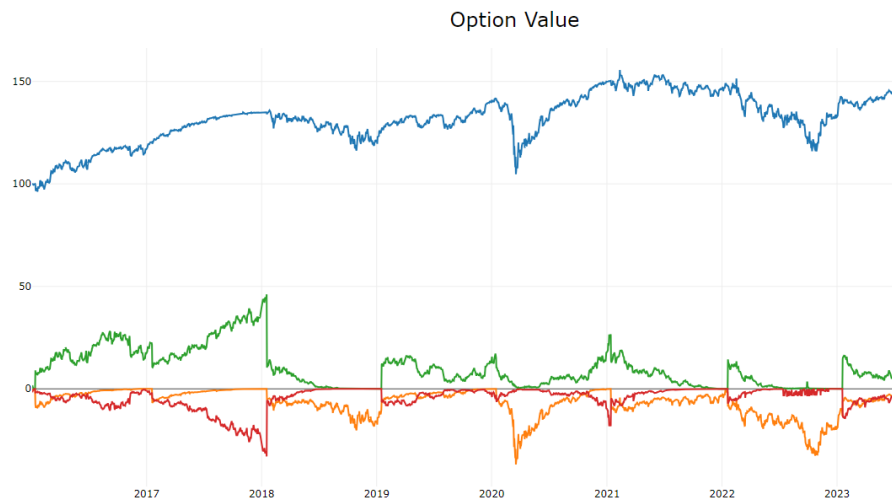


Source: Volos



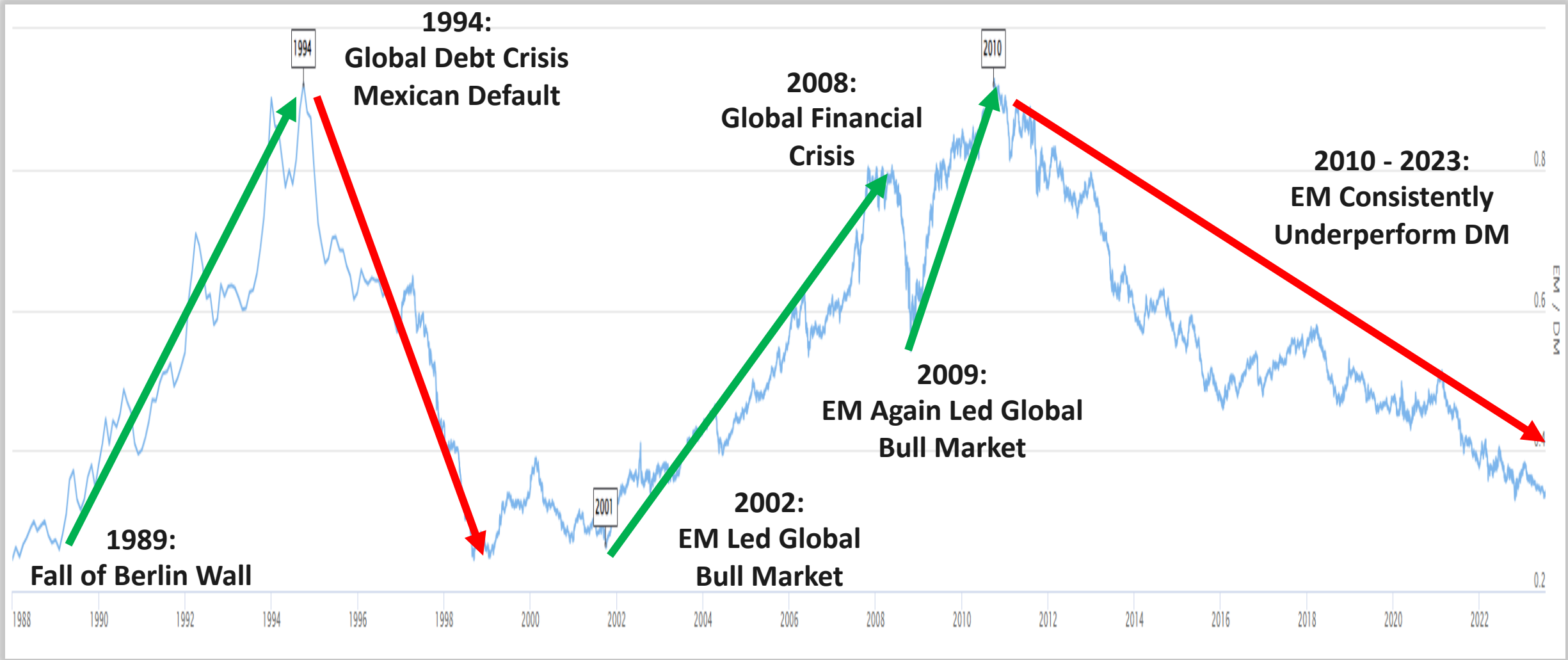
P&L Allocation Analysis

- Understanding the WHY!
 - Ability to visualize and track the performance of every leg for any complex strategy
 - Multi-faceted options analysis tools further your understanding of strategies



Emerging Markets (EM)

Long Term Relationship



Emerging Markets (EM)

NDX/SPX and EM Index (10 Years)

EEM ■ NDX 3118.5701 X ■ SPX 1691.4199 X

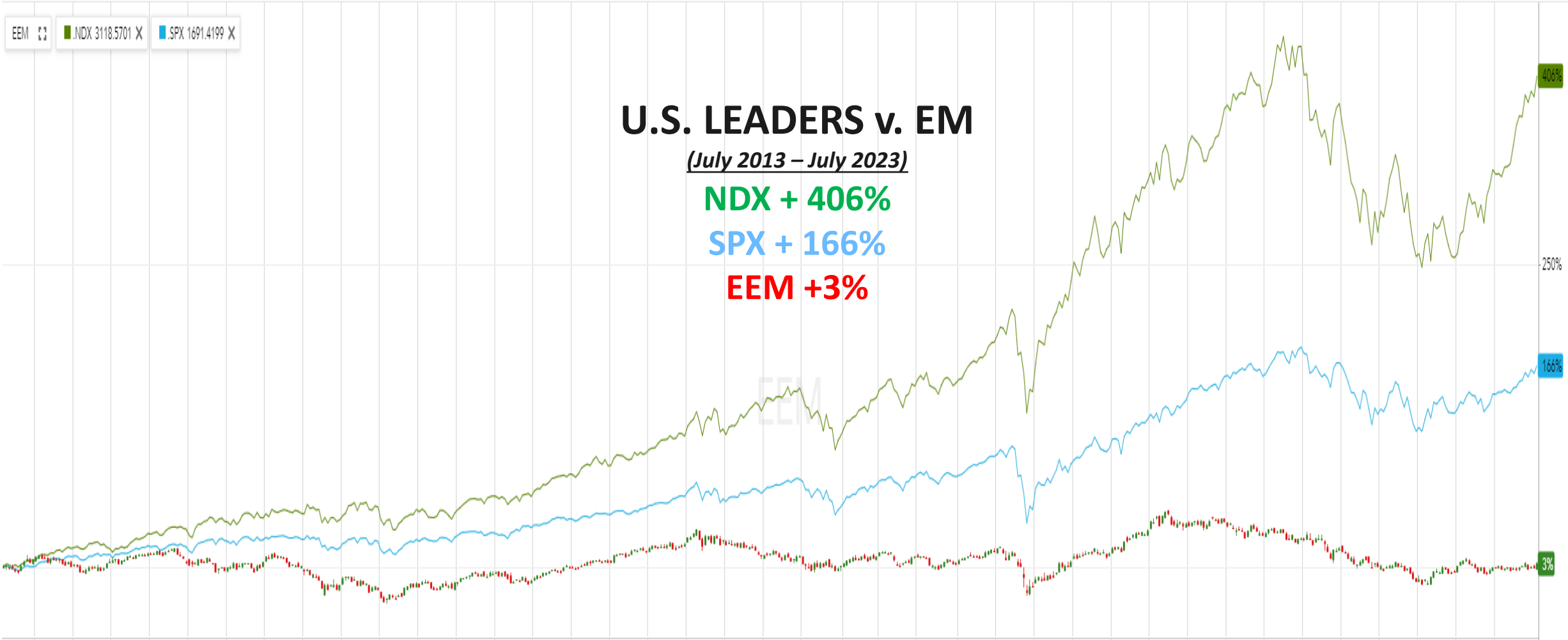
U.S. LEADERS v. EM

(July 2013 – July 2023)

NDX + 406%

SPX + 166%

EEM +3%



Emerging Markets (EM)

Recent Call Spread Analysis

- The Exposure:
 - Significant long delta/gamma/vega – paying significant decay
 - Unlikely it's a standalone positions, but possible
 - \$42.50 = 52-week highs

Total Strategy

Bid	Mid	Ask	Delta	Gamma	Theta	Vega
0.26	0.29	0.31	1208538.30	460234.40	-32586.14	192376.10

Buy/Sell	Quantity	Expiration/Strike	Bid	Ask	Theoretical Price	Evaluation Price
<input checked="" type="radio"/> Buy <input type="radio"/> Sell	75000	Sep 15 2023 43 Call	0.38	0.40	0.328	0.40
<input type="radio"/> Buy <input checked="" type="radio"/> Sell	75000	Sep 15 2023 45 Call	0.09	0.12	0.084	0.10

P/L CALCULATOR

Add Option Contract(s) Find Symbol

Price/Volatility Interest Dividends/Size

Evaluation Price

Days to Expiration

Today: 07/17/23 Expiration: 09/14/23

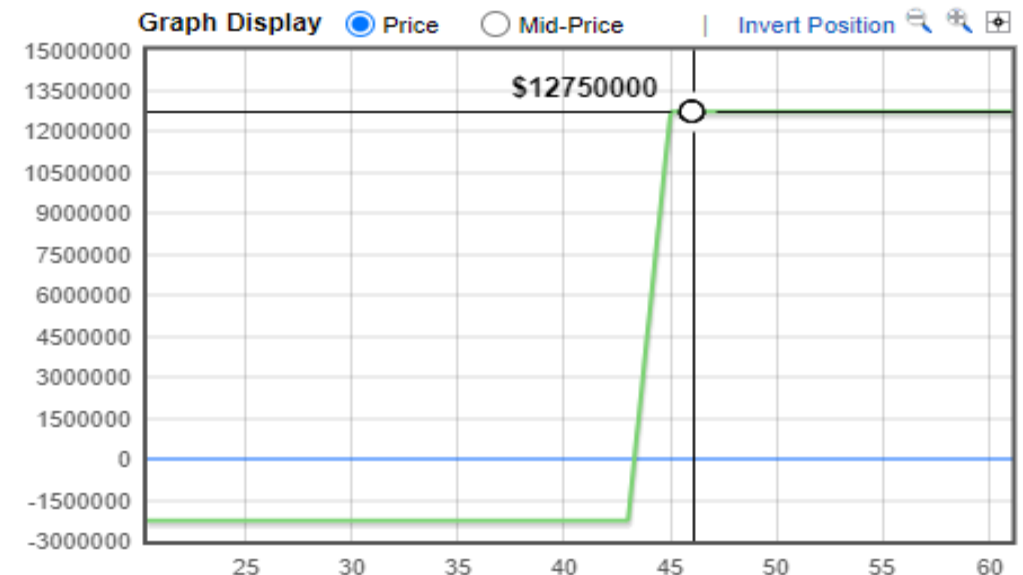
Volatility Change Absolute

EEM - iShares MSCI ...

Last: 40.76 | Change: -0.30

Price Points	P/L
25.00	-\$2,250,000.00
43.30	\$0.00
45.00	\$12,602,056.86
45.05	\$12,750,000.00
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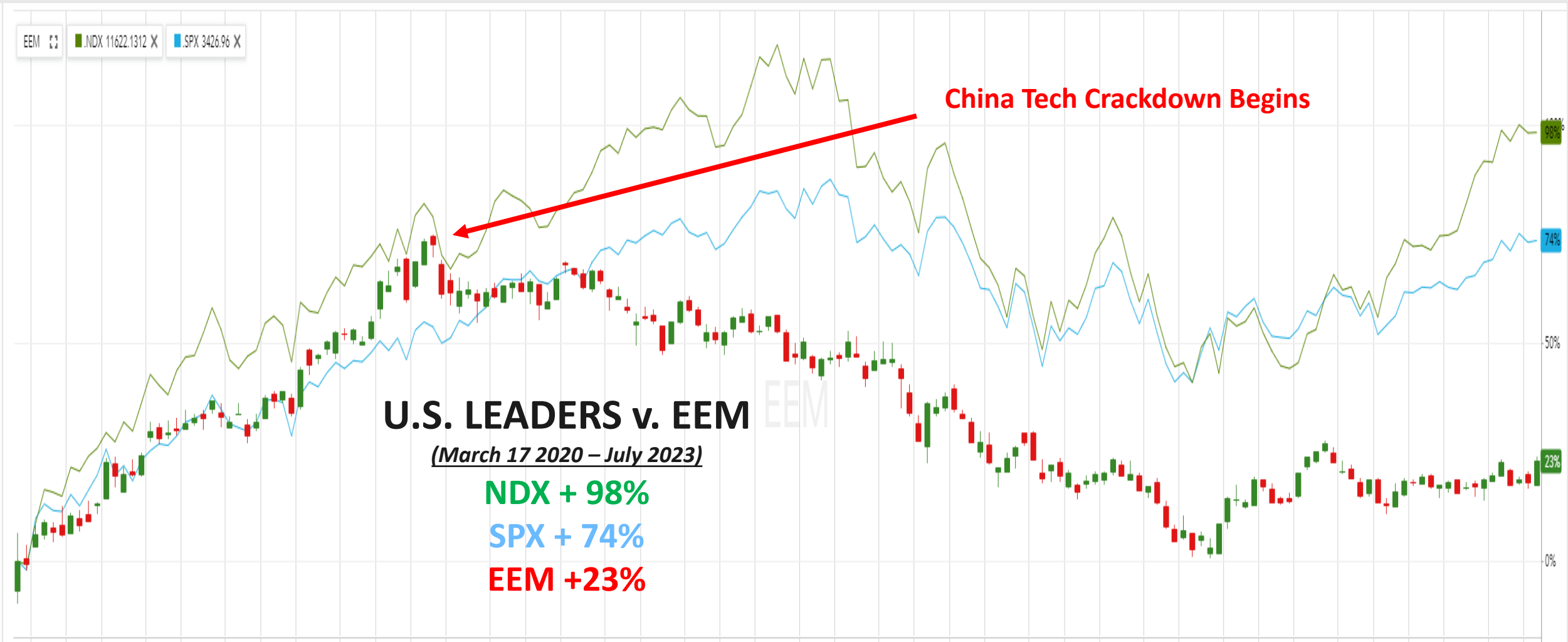
Refresh | [How to Use the P/L Calculator \(PDF\)](#) | [View Demo](#)



Source: Fidelity

Emerging Markets (EM)

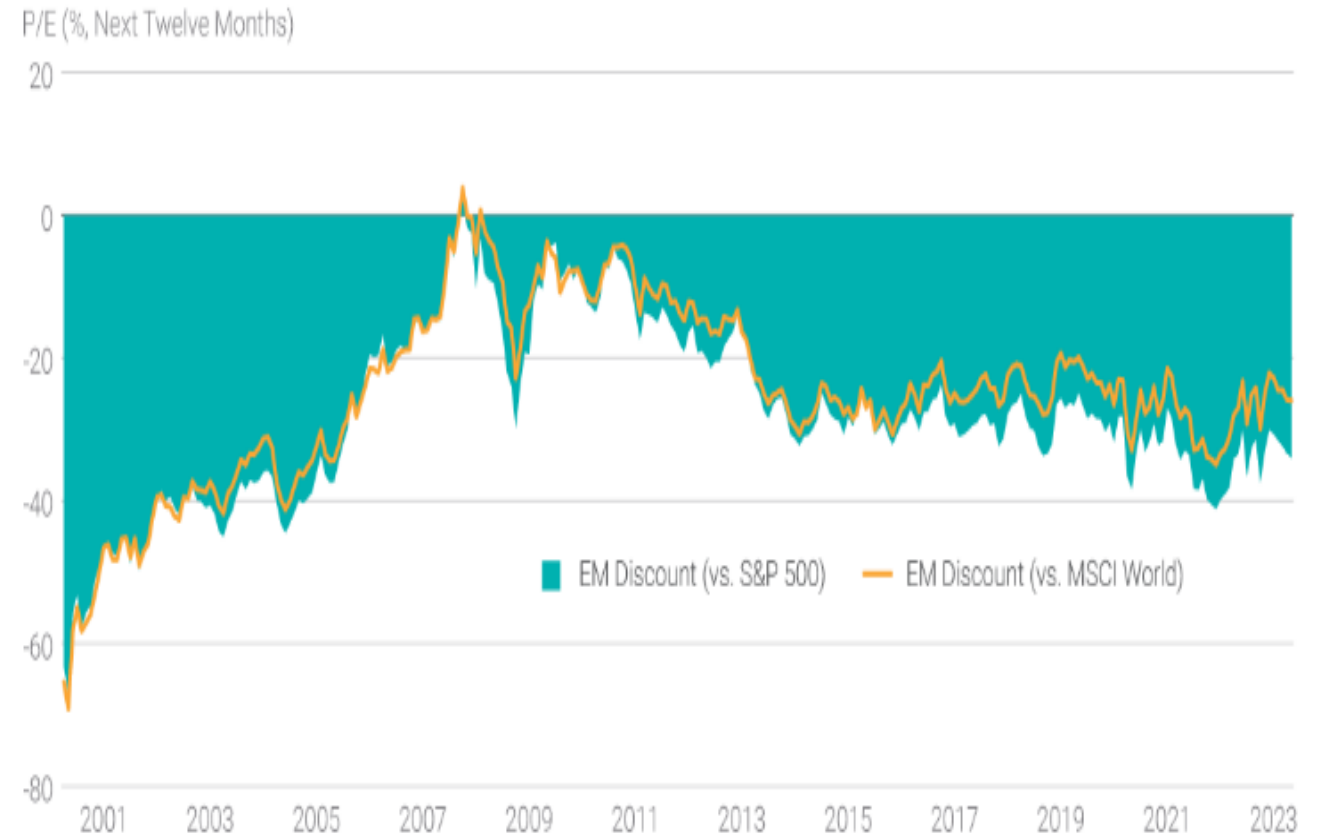
Covid Bottom – EEM Lags



Emerging Markets (EM)

Potential Future Narratives

- The Favorable:
 - Example: India population 80% < 50 years old
 - New energy tech requires commodities from EMs
 - EVs – nickel, copper, bauxite
 - Greater political stability?
- The Concerning:
 - U.S. rates – higher for longer?
 - Return of disinflation?
 - Return to more protectionist policies/increased political uncertainty?

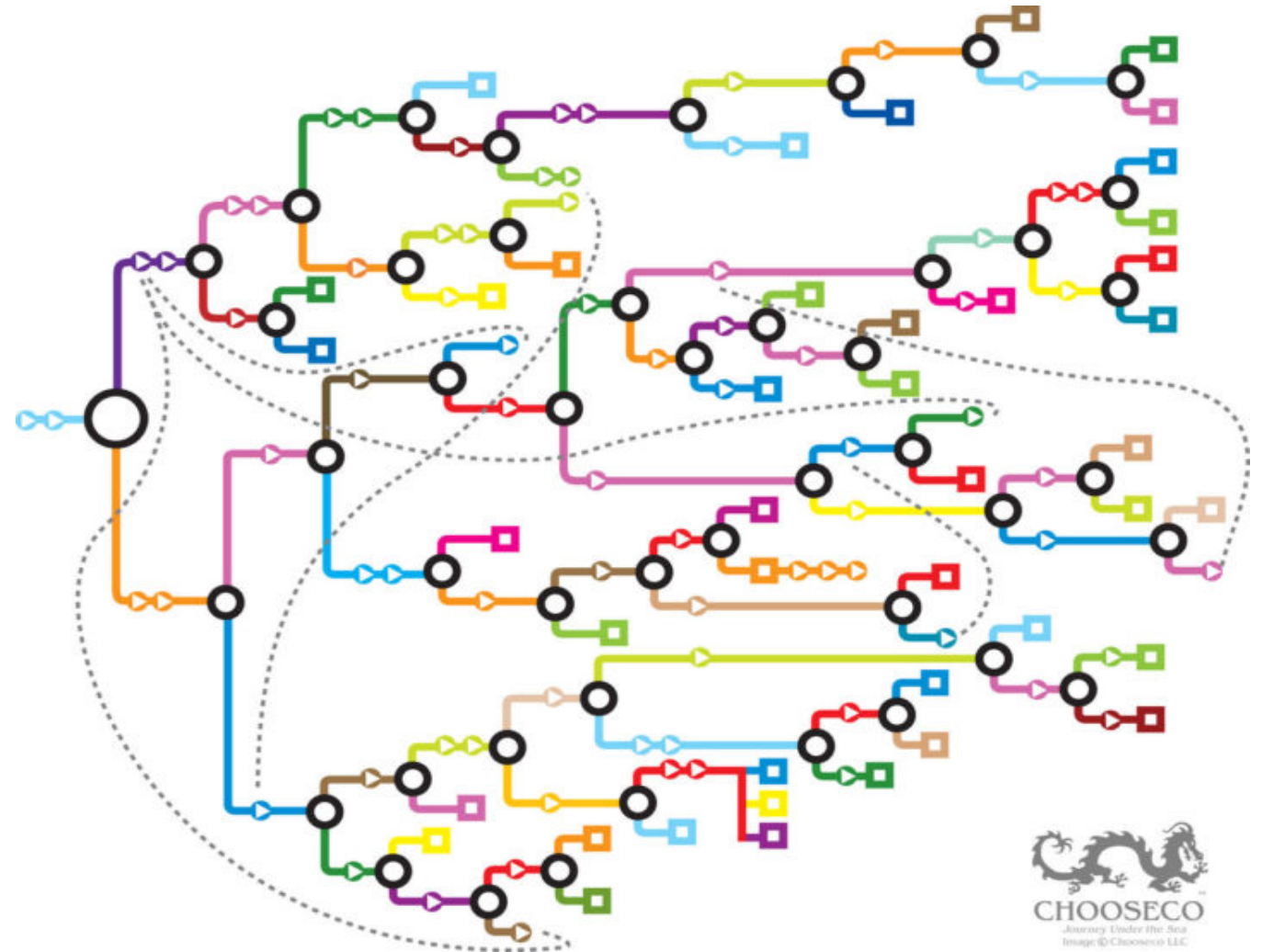


Source: Lazard Asset Management + Fact Set



Risk Management – Have a PLAN!

- Alternatives are COSTLY!
 - IV moved up quickly
 - Index moved well beyond short strike
 - Margin requirements would increase
- Plans Protect
 - Butterfly? (Buying the 14750C) = cleanest.
 - Long deltas elsewhere?
 - Futures?
 - Stubbornness can be very costly – just ask me 😊



Questions?

Contact Us:

indexoptions@nasdaq.com

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