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December 13, 2023

Nasdaq

Another Record-Setting Year for Options: Why This Matters for You Now and in the New Year

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Nasdaq

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As with all investments, your capital is at risk



Record Breaking Volumes: Why it Matters for You Now & in the New Year

Interactive Brokers Webinar
December 13, 2023

Kevin Davitt

*Nasdaq – Head of Index Options
Content*

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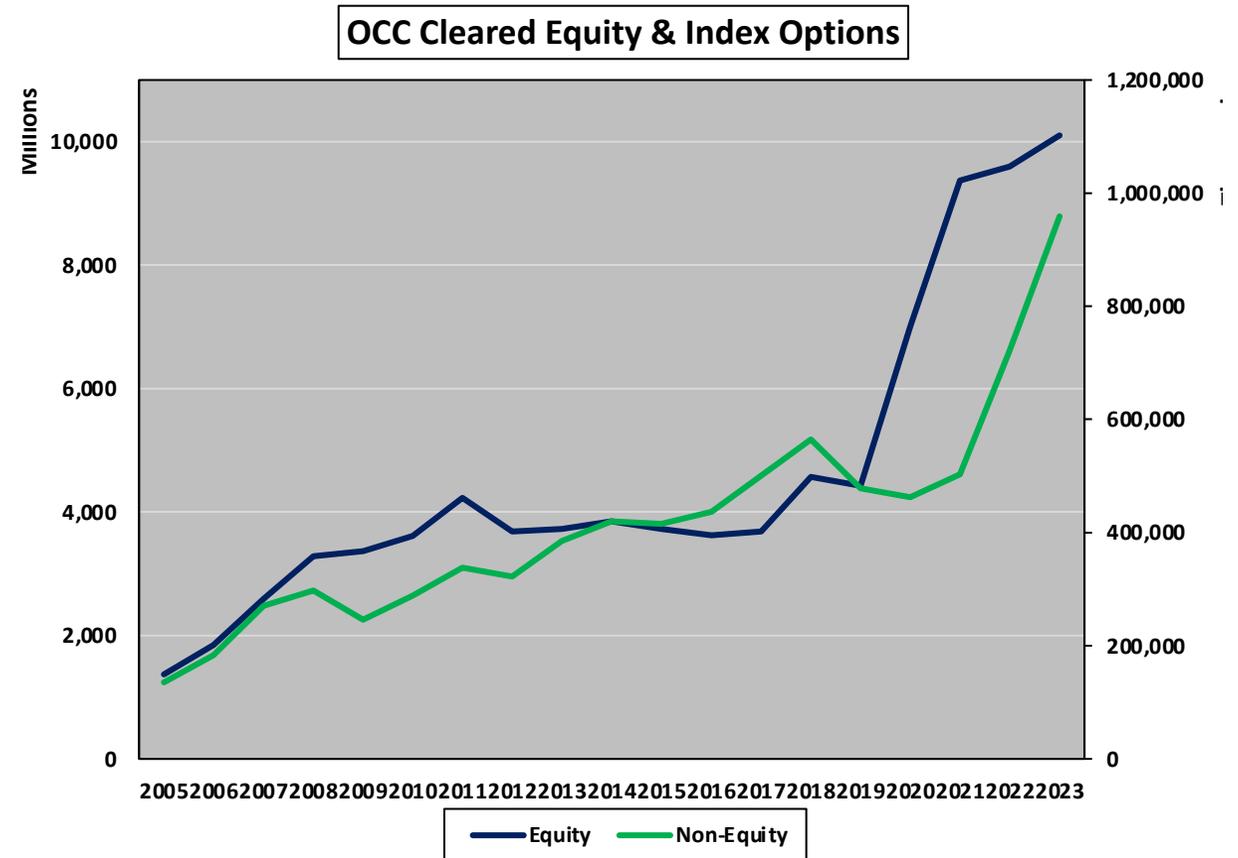
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Index Options Growth Powers Industry in 2023

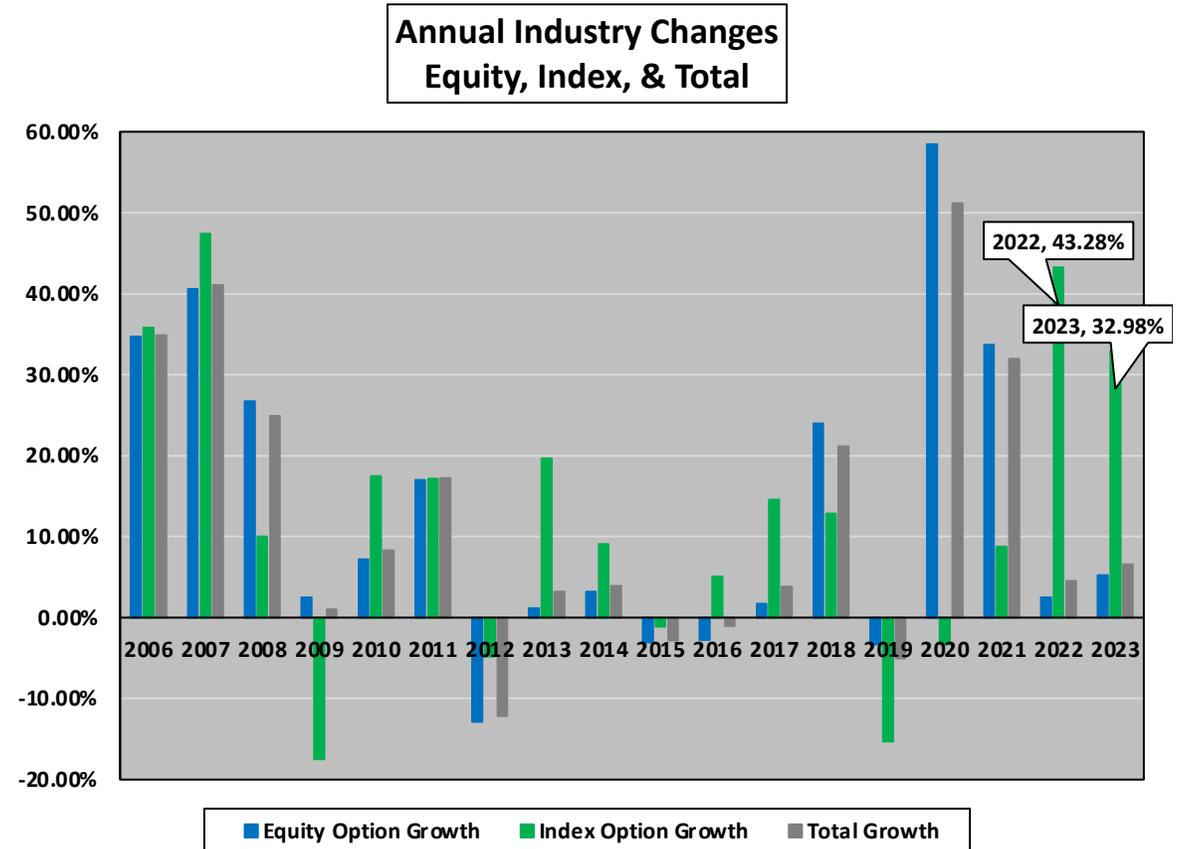
- Another record year for equity & non-equity volumes*
- Growth much more pronounced in index options volumes (2022 – 2023) v. equity in years prior
- Index options embedded in more (accessible) ETF products
- Continued growth in short-dated option use

**Based on “average” Dec. volumes*



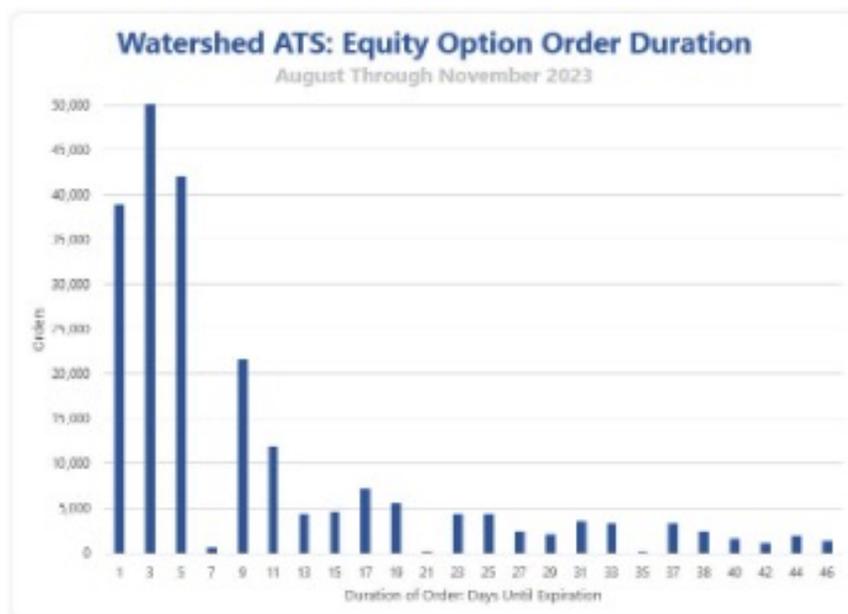
Index Options Growth

- Index weeklies introduced in 2005 = big growth in 2006
- More recently, massive equity option growth 2020 & 2021
- Index options reemerge in past two years as risk management focused macro & rates rise.
- Introduction of more granular expiries (late 2021 expanded in 2022) key role in index option growth...



The Importance of Immediate Feedback?

Year	Options ADV	ODTE ADV	Non ODTE ADV
2022	40,104,651	5,667,640	34,437,011
2023	43,155,204	8,587,018	34,568,186
Y/Y Change	+8%	+52%	0%



Science Behind the Success?

Feedback is Time Sensitive

Michael L. Epstein , Amber D. Lazarus, Tammy B. Calvano, Kelly A. Matthews, Rachel A. Hendel, Beth B. Epstein & Gary M. Brosvic

 885 Accesses  140 Citations [Explore all metrics](#) →

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Abstract

Multiple-choice testing procedures that do not provide corrective feedback facilitate neither learning nor retention. In Studies 1 and 2, the performance of participants evaluated with the Immediate Feedback Assessment Technique (IF AT), a testing method providing immediate feedback and enabling participants to answer until correct, was compared to that of participants responding to identical tests with Scantron answer sheets. Performance on initial tests did not differ, but when retested after delays of 1 day or 1 week, participants evaluated with the IF AT demonstrated higher scores and correctly answered more questions that had been initially answered incorrectly than did participants evaluated with Scantron forms. In Study 3, immediate feedback and answering until correct was available to all participants using either the IF AT or a computerized testing system on initial tests, with the final test completed by all participants using Scantron forms. Participants initially evaluated with the IF AT demonstrated increased retention and correctly responded to more items that had initially been answered incorrectly. Active involvement in the assessment process plays a crucial role in the acquisition of information, the incorporation of accurate information into cognitive processing mechanisms, and the retrieval of correct answers during retention tests. Results of Studies 1–3 converge to indicate that the IF AT method actively engages learners in the discovery process and that this engagement promotes retention and the correction of initially inaccurate response strategies.

The Impact of the Immediate Feedback Assessment Technique on Course Evaluations

ABSTRACT

This project reports the results of two studies that investigated the impact on course evaluations of using partial credit iterative responding (PCIR) with the Immediate Feedback Assessment Technique (IF-AT) forms on summative course assessments. This project also quantifies grade inflation from utilizing different PCIR schemes and documents the percentage of possible partial credit students earned. Study 1 compared evaluations in courses where exams were manipulated. Study 2 compared evaluations in courses where daily reading quizzes were manipulated. Results from Study 1 revealed that multiple course evaluation scores increased 10% in the PCIR condition. Students earned 75% of the partial credit available through PCIR, which resulted in a 10% increase in their exam scores. Results from Study 2 revealed no difference in course evaluations between conditions. Students earned roughly 40% of the partial credit available through PCIR, resulting in a 4 to 8% increase in their quiz scores, depending on the PCIR scheme.

KEYWORDS

Immediate Feedback Assessment Technique (IF-AT), course evaluations, multiple choice exams, quizzes, partial credit iterative responding

This paper reports the results of two studies that investigated the impact on course evaluations of using partial credit iterative responding (PCIR) with the Immediate Feedback Assessment Technique (IF-AT) forms on summative course assessments. This paper also quantifies grade inflation from utilizing different PCIR schemes and documents the percentage of possible partial credit students earned. Although research on the IF-AT forms has been conducted for over a decade, this project is the first to address their relationship to course evaluations and grade inflation.

The Immediate Feedback Assessment Technique, first reported by Epstein, Epstein, and Brosvic (2001), is an alternative to traditional Scantron bubble sheets for recording answers to multiple choice (MC) questions. As described by DiBattista, Gosse, Sinnige-Egger, Candale, and Sargeson (2009, p. 313),

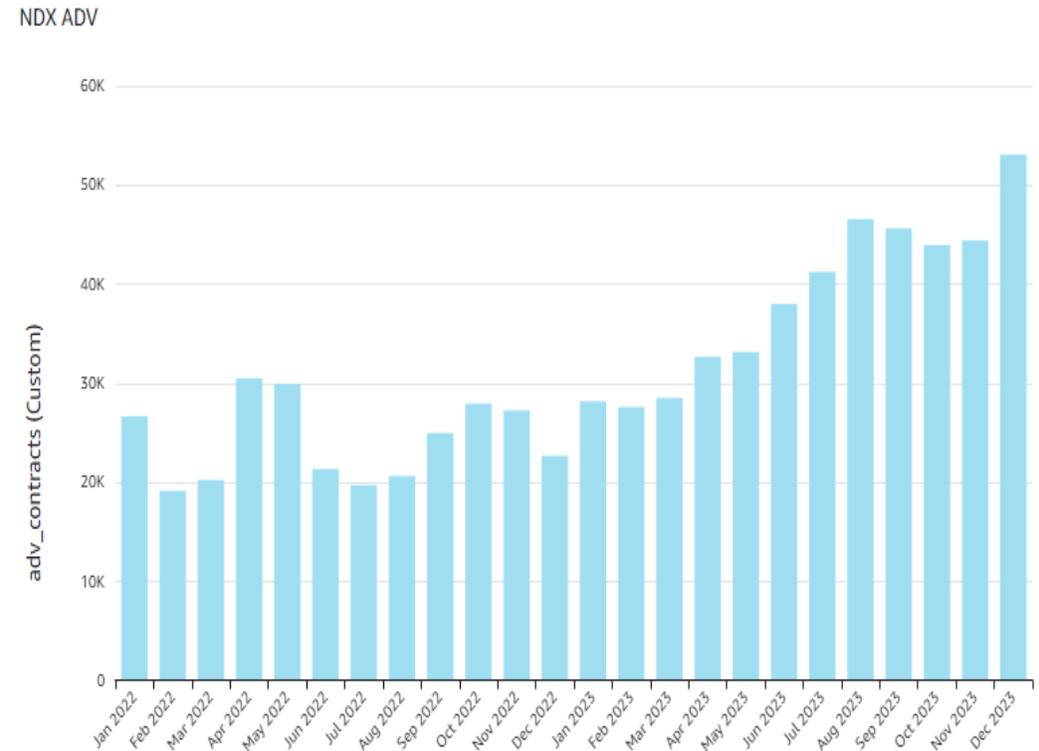
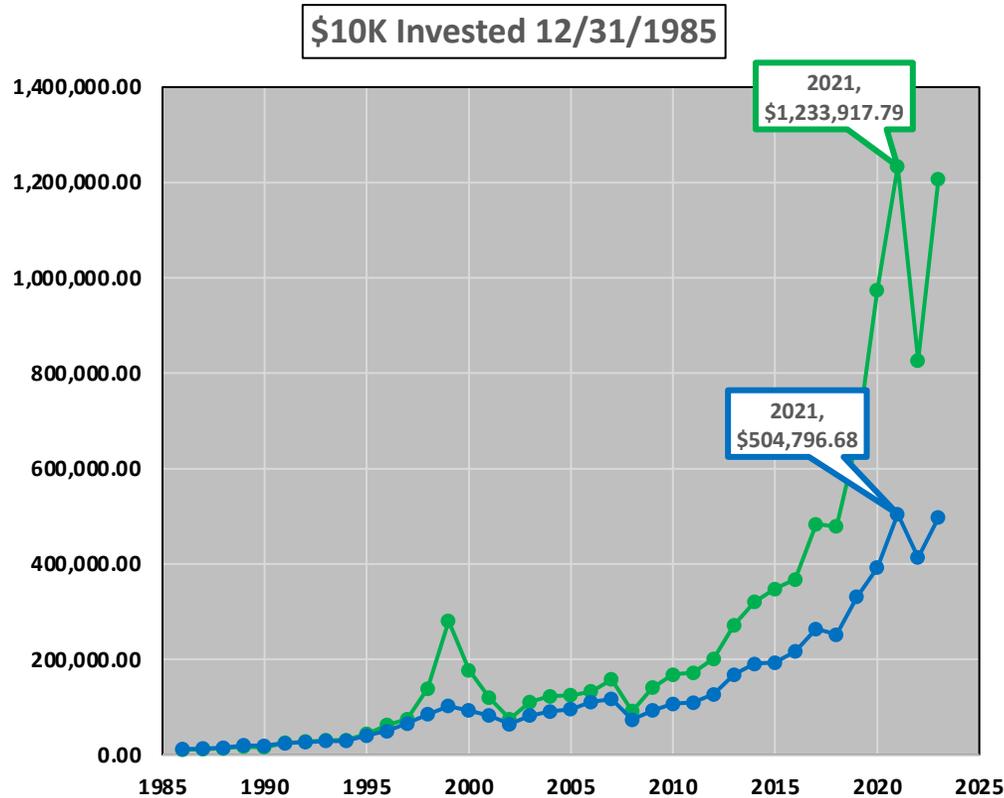
Feedback... Now Please

- Value of Immediate Feedback
 - Learning is enhanced
 - Students who receive immediate feedback outperform longer term (Attali & Powers, 2009)
 - Quicker Mastery: Ability to focus on strengthening areas of weakness
 - Deeply Embedded Knowledge: Understanding “sticks” when feedback occurs quickly (Epstein & Brosvic, 2001)
- Value of Immediate Feedback
 - Higher levels of engagement
 - Volume data is a testament to this point
 - Ecosystems Thrive: Virtuous cycle improves overall understanding and engagement
 - Are you “accepting” more feedback from the market and using it to strengthen your knowledge (& ideally bottom line)?
 - **Difficult to not confuse positive P&L and “knowledge”, but the WHY matters**



Record Volumes & What It Means

Performance As Catalyst for NDX Growth



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Source: Options Clearing Corporation, Nasdaq, DJ S&P Indices



Looking Ahead to 2024

- Active ETFs – Now with Short-Dated Options
 - Keys:
 - Exchange groups enabling short-dated options trend will become longer-term trend
 - Weds expiries available in long-bond, gold, silver, crude and natural gas ETF products
 - No earnings events for commodity products & FOMC meetings typically conclude on Wed.

Nasdaq bets on boom in 'zero day' options with new contracts

US exchange lists new options tracking gold, oil and Treasury ETFs



Nasdaq says investors are looking for ways to take positions around risky events such as Federal Reserve meetings © Bloomberg

Source: Financial Times

Largest Options-Based Products

- More Product Choice
 - ~6000 underlying products:
 - Hundreds of option-based ETPs
 - Largest AUM in index-based, but single name products also growing
 - End users get potential benefits of optionality w/o managing nuance (expense ratios vary)
 - Typically, tax efficient structures – particularly on index side*

**Consult with tax advisor*

Tickr	Name	Segment	Issuer	Expense Ratio	AUM
JEPI		Equity: U.S. - Large Cap	JPMorgan Chase	0.35%	\$ 12,620,000,000
QYLD		Equity: U.S. - Large Cap	Mirae Asset Global Investments Co., Ltd.	0.60%	\$ 6,440,000,000
XYLD		Equity: U.S. - Large Cap	Mirae Asset Global Investments Co., Ltd.	0.60%	\$ 1,850,000,000
DIVO		Equity: U.S. - Large Cap	Amplify Investments	0.55%	\$ 1,730,000,000
RYLD		Equity: U.S. - Small Cap	Mirae Asset Global Investments Co., Ltd.	0.60%	\$ 1,250,000,000
BUFR		Equity: U.S. - Large Cap	First Trust	1.05%	\$ 703,970,000
NUSI		Equity: U.S. - Large Cap	Nationwide	0.68%	\$ 560,170,000
BUFD		Equity: U.S. - Large Cap	First Trust	1.05%	\$ 526,220,000
KNG		Equity: U.S. - Large Cap	First Trust	0.75%	\$ 488,370,000
PJAN		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 487,720,000
PSEP		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 482,240,000
CCOR		Alternatives: Absolute Return	Core Alternative Capital	1.09%	\$ 460,270,000
SPD		Equity: U.S. - Large Cap	Simplify Asset Management Inc.	0.29%	\$ 447,110,000
PJUL		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 445,500,000
JEPQ		Equity: U.S. - Large Cap	JPMorgan Chase	0.35%	\$ 418,620,000
PAUG		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 418,380,000
TAIL		Asset Allocation: U.S. Target	Cambria	0.59%	\$ 406,390,000
DNOV		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 406,230,000
PMAY		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 395,890,000
USOI		Commodities: Energy Crude	Credit Suisse Group AG	0.85%	\$ 368,760,000
FMAY		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 351,090,000
PJUN		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 346,880,000
SWAN		Asset Allocation: Global Targ	Amplify Investments	0.49%	\$ 317,010,000
FAUG		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 312,590,000
PAPR		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 305,320,000
UJAN		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 303,450,000
FJUN		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 294,440,000
DFEB		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 293,890,000
FNOV		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 285,260,000
FFEB		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 266,250,000
DAPR		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 265,980,000
FAPR		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 261,570,000
DDEC		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 256,470,000
POCT		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 240,060,000
PFEB		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 238,450,000
PMAR		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 222,720,000
FJUL		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 221,260,000
FDEC		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 212,140,000
PDEC		Equity: U.S. - Large Cap	Innovator	0.79%	\$ 209,250,000
DMAR		Equity: U.S. - Large Cap	First Trust	0.85%	\$ 202,180,000

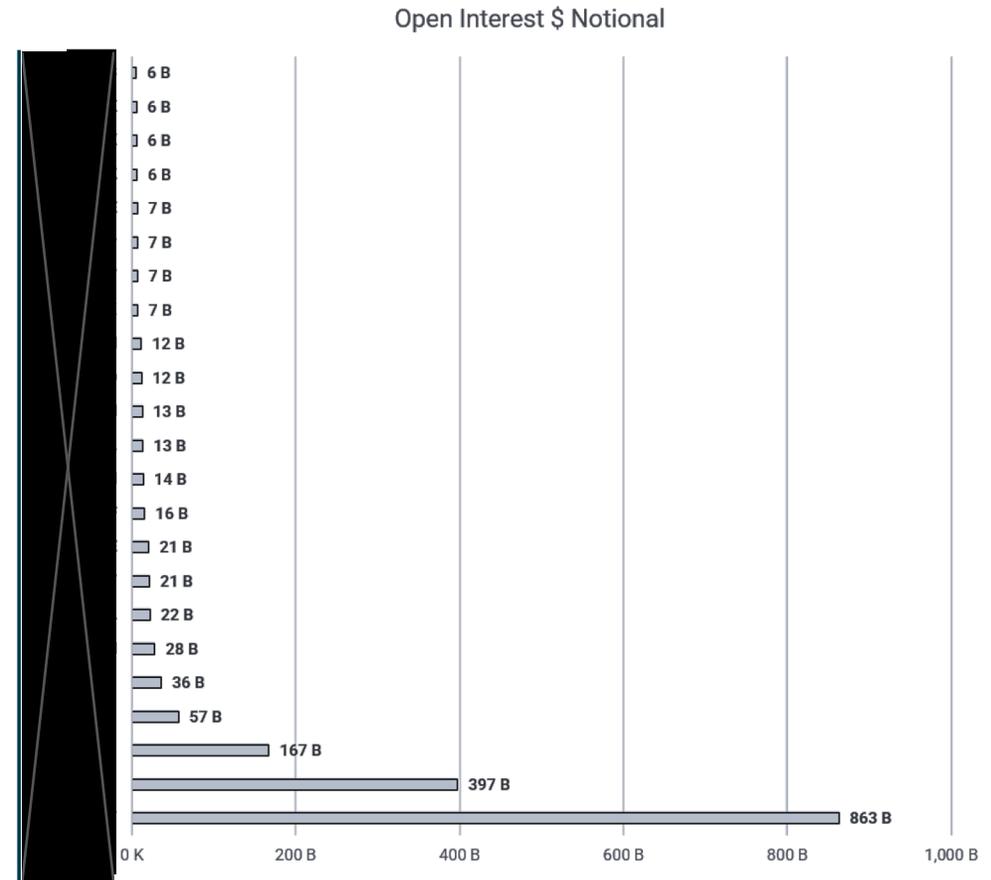
Source: Volos Software



Record Volumes & What It Means

Largest Options-Based Products

Name	Notional Volume (\$)	Notional Open Interest (\$)
SPY	96 B	863 B
QQQ	16 B	398 B
IWM	5 B	167 B
HYG	1 B	57 B
GLD	392 M	36 B
EEM	14 M	28 B
DIA	648 M	22 B
TLT	375 M	21 B
XLE	286 M	21 B
XLF	32 M	16 B
FXI	165 M	14 B
EFA	20 M	13 B
SMH	790 M	13 B
LQD	31 M	12 B
XLI	17 M	12 B
ARKK	578 M	7 B
SLV	44 M	7 B
XOP	224 M	7 B
KRE	7 M	7 B
EWZ	26 M	6 B
GDV	48 M	6 B
XLK	50 M	6 B
KWEB	77 M	6 B
XBI	47 M	5 B
XLV	29 M	5 B
XLY	32 M	5 B
OIH	47 M	4 B
USO	117 M	4 B
TQQQ	168 M	4 B
XLP	9 M	3 B
IYR	6 M	3 B
SQQQ	123 M	3 B
IEF	5 M	3 B
XRT	27 M	3 B
ASHR	13 M	2 B

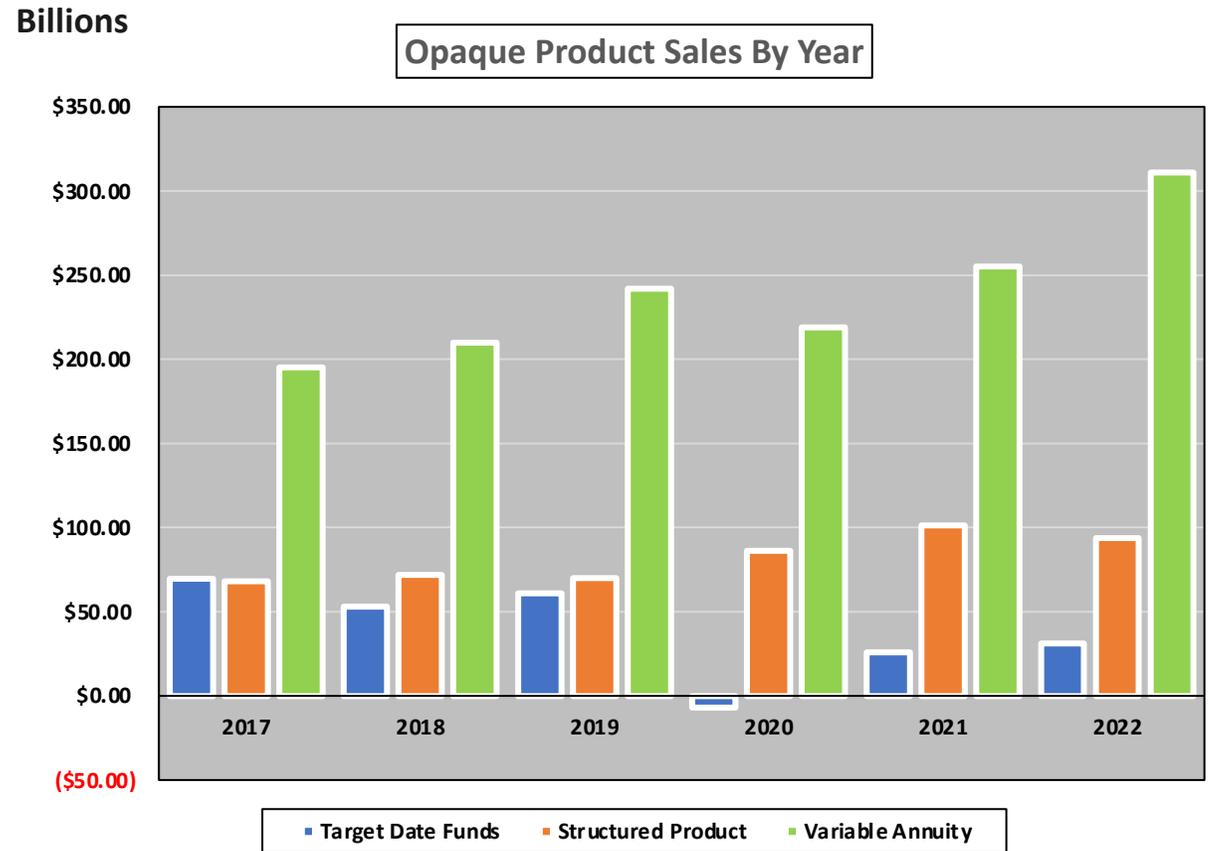


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Source: Volos Software

Largest Options-Based Products

- The Growth Understood
 - Bringing opaque structures into the listed markets (democratization)
 - Structured Products:
 - \$1.2T market
 - ~\$93B 2022 U.S. sales
 - Variable Annuities:
 - \$2.1T market
 - ~\$310B 2022 U.S. sales
 - Target Date Funds:
 - \$1.7T market
 - ~\$31B 2022 U.S. sales



Make a Plan & Be Accountable

- Growth -> Liquidity
 - Broader liquidity is a benefit to all market participants
 - Learn from the past
 - Evaluate performance and establish clear plan for 2024
 - Trading Journal:
 - Why enter?
 - Exit point (positive & negative)
 - Postmortem (what happened & why)
 - Understand you can be “wrong” (P&L) & “right” in your approach
- Decision Making (is Difficult)
 - Choice can be overwhelming
 - Choice “architecture” – put a framework around your approach
 - [Todd Simkin \(SIG\) Interview](#) Takeaways:
 - The answer to every trading question is “it depends”
 - No answer is correct in every case
 - Ask what your decision/ outcome is dependent upon
 - Be disciplined (p.s.,It’s difficult, but valuable)

