

# 1<sup>st</sup> Quarter Commentary

April 2024

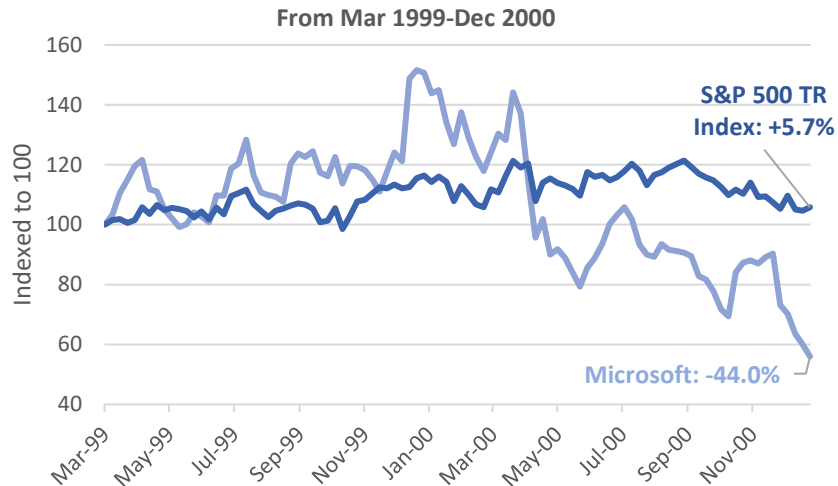
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## "Horizon Hates Technology Stocks?" Do We? (Reviewing Our Past to Asset-Allocate Our Future.)

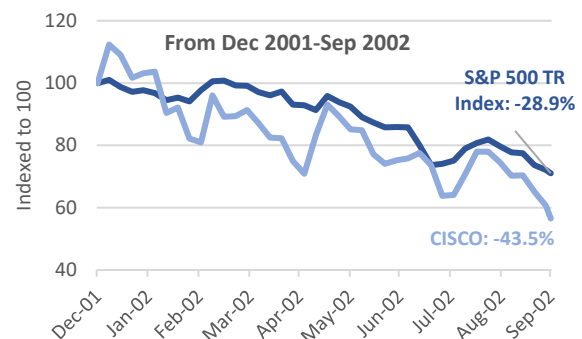
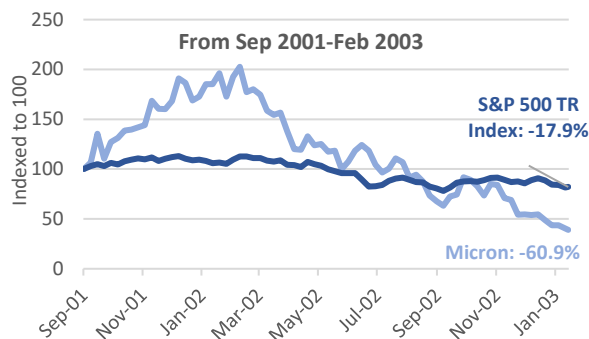
Somewhere along the line, people got the idea that we “hate” technology stocks. Yes, that was the specific term communicated to me. It’s not true, though. Three of our most successful and impactful investments have been technology stocks. Really.

It’s an understandable mis-impression. There *is* history. These charts show some of the tech stocks we wrote short sale reports on, from the date of publication to when they reached bottom. In February 1999, the approximate middle of the spectacular Dot.com Bubble, we wrote a short-sale report on Microsoft. It had already appreciated 260% from year-end 1996.



Naturally, the shares rose another 50%, to an all-time peak a year later, before their 60%-plus decline from that peak.

We wrote short sale reports on a raft of other technology companies, too. Some were as late as December 2001, after the iShares U.S. Technology ETF had declined almost 60%. Even in these latter cases, like Micron Technology and Cisco Systems, their shares had the temerity to continue rising precipitously after our Sell recommendations, before they ultimately collapsed. Collapse meant down 81% and 50% from their peaks.

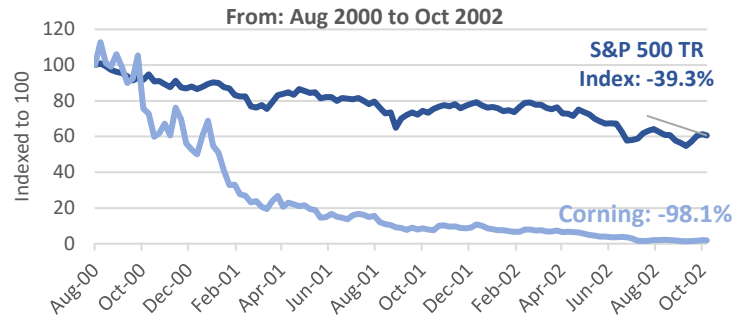


Source: Bloomberg

The greatest collapse among the short sale recommendations was *not*, interestingly, a technology stock. It was a supplier: Corning. Historically a household-name glass and ceramics maker, it became a household-name internet company as the leading fiberoptic cable manufacturer for internet service providers. Inter-

net usage was experiencing explosive demand growth, and Corning rose over 600% between year-end 1996 and its August 2000 peak.

Corning remains a classic example of *co-variance risk*—the often-hidden concentration risk that investors periodically and unknowingly take on. A portfolio might be categorized, in those neatly divided industry sector pie charts, as X% in technology. But it might contain far more than X% if you include the suppliers and service providers from other sections of the pie chart whose fortunes are tightly bound to their high-growth primary customers. Corning shares fell from \$113 to under \$2.



Some of the Horizon Kinetics *Devil's Advocate* short sale reports from the Dot.Com Bubble period:

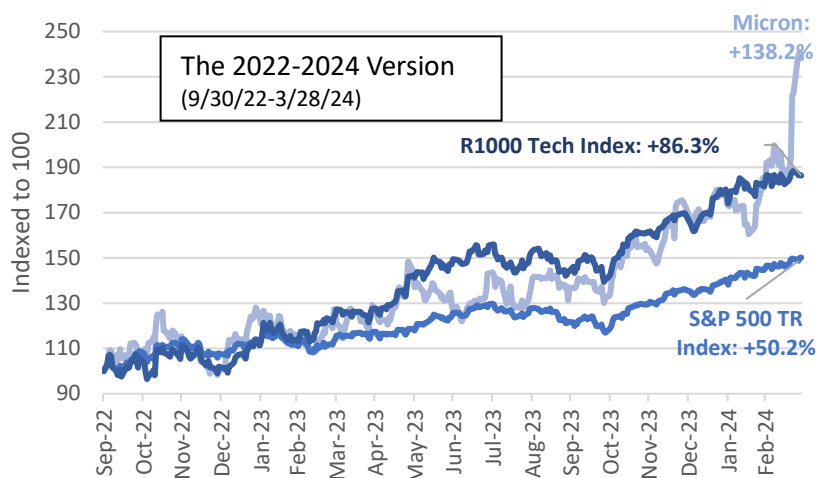
Microsoft, Feb 1999	Micron Technology, July 2001
Corning Inc., Aug 2000	Computer Associates, Aug 2001
Intel, Oct 2000	Cisco Systems, Dec 2001
Applied Materials, Jun 2001	

So, we must hate technology stocks. Except we don't. It's just that when most people like them—especially when they love them—they're not just priced for success, they're priced so that even success will not yield a satisfactory result. Moreover, absence of success can mean, well...

One example from 2001 will illustrate: Micron Technology, which today is once again a standout, top performer.

Today, Micron is known for outperforming even the iShares U.S. Technology ETF over the past two years. That's because of what's happened in the last six months: AI chips.

Nvidia happened. AI chip technology is just so world changing, the potential is just so great, that there is almost no stock price for these companies that, viewed through a certain lens, is too high. Through that lens, the performance risk would be *not* having a position in it.

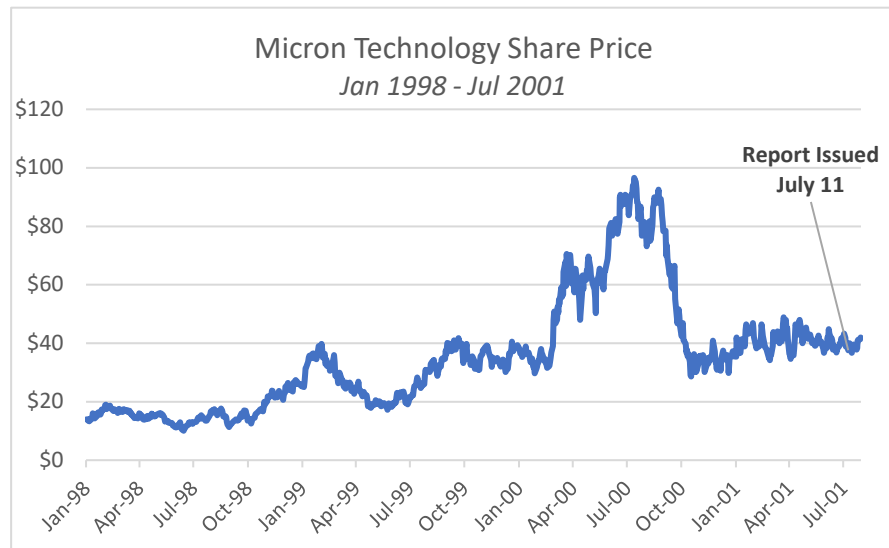


Source: Bloomberg. R1000 Tech Index Russell 1000 Technology RIC 22.5/45 Capped Index (USD)

That's Micron Technology today, and it was also Micron Technology 24 years ago. In 2000, Micron was the king of high-capacity DRAMs, the semiconductor memory chip for PCs. It had, as they say, "a commanding market share" of 25%; it was in innovation mode, upgrading its chips from die sizes of 0.15 microns down to 0.13 microns, one-half their 1996 width; and it was in growth mode. Over the prior six years, revenues grew 28% annually; *in its August 2000 fiscal year, sales were up 150%!*

Nevertheless, we wrote a short sale report on Micron in July 2001, even after it was down 60% from its prior year peak. That peak was almost 900% higher than its mid-1998 price two years earlier.

It might seem ridiculous to question a company like this, with its extraordinary growth prospects and leading competitive position. One could say much the same for any of the other short sale recommendations, whether from that period, or even for today's bunch. So, why'd we do it?



Source: Bloomberg

### [The Horizon Kinetics Vicennial BUY, HOLD, SELL Game!!](#)

You know what? Don't listen to us. Decide for yourself. Following is a simple list of facts about Micron in 2001. These are the guts of the 20-page research report, condensed into 12 bullet points. Take a look, and you decide if this top performer in the final year of the greatest bull market U.S. stock market history is something you would have BOUGHT, HELD, or SOLD! Careful, though, you might have disagreed with a near unanimity of investors and Wall Street analysts in July 2001. And purely based on facts, without being a hater.

#### [Step 1: The Facts on the Ground](#)

- As of June 2001, DRAM chip prices fell 80% to 90%, from a year earlier. Some sold below cost.
- Micron's gross margin fell from 51% in FY2000 to below zero. That's the raw cost to produce a chip.

- Inventory turns fell from a long-term average of 11.7x to under 4x, meaning sales slowed so much that lots of existing inventory wouldn't be sold. Further write-downs were likely.
- In prior downturns, Micron traded at a low of 1.0 to 1.5x trailing revenues. In July 2001, it traded at 4x trailing 4-quarter revenues and 7.6x the June quarter's run-rate revenue.
- Wall Street year-forward earnings estimates were revised down from \$1.64/share to \$0.53, for a new P/E ratio of 73 instead of 23. Investors implicitly priced the shares for a significant recovery in the coming year. Yet, in 1995, when Micron's return on equity was 44%, it had traded at a P/E of 9x.
- Also, DRAM prices were traditionally supported by a PC industry that grew 20% to 30% a year in the 1990s. By 2001, the market was near-saturated, with PC unit growth estimates down to 6%.
- During the PC expansion period, DRAM manufacturers had pricing power because of the high demand. Accompanying the collapse in unit demand growth in 2001, was intensifying competition from Asian manufacturers. This was commoditizing the DRAM market. In addition, China was likely to emerge as a significant DRAM producer in the next few years.

[Step 2: Apply the Absurdity Nullification App \(Public Markets Investment Version\)](#)

It's understandable how someone favorably inclined toward Micron in 2001, could acknowledge much of the foregoing fact-set, yet still reject its conclusion. A bullish investor would reject the low consensus earnings estimates, and propose that positive factors—like the income and capital gains tax reduction legislation signed by George W. Bush on June 7<sup>th</sup> of that year—had yet to take effect. The resultant improved economic conditions would support a rebound in PC sales and DRAM pricing. With that forward-looking growth belief, the absurd valuations could be ignored as temporary and irrelevant.

How to interact with someone who holds to such assertions? In investing, at least, one method is to completely accept their bull-case premises, and to then measure the resulting prospective stock price. If the outcome is favorable, then even a “hater,” if rational, should accept the premise. If the outcome, despite allowing for every positive assertion, fails, then one has a different answer. For Micron, the exercise, abridged here, worked like this:

In order to buy or hold Micron shares in 2001, an investor would have had to believe the following:

- That DRAM prices would increase materially in the late 2001 and/or in 2002.
  - *However, DRAM prices did not increase even in the bubble year of fiscal 2000. The history of semiconductor chip pricing was that in a normal environment, prices consistently decline.*
- A shareholder also had to believe that Micron could grow by continuing to capture market share.
  - *At a 25% market share, Micron would need to prevail over companies like Samsung and Toshiba, which were supporting a new, far faster type of chip. To take share from Micron's then-dominant standard technology, they were engaged in serious price competition.*
  - *Plus, the competing chip had already secured the lead as the only memory chip in the Intel Pentium 4 microprocessor chipset, though other Micron chips were still being used.*
  - *Also, the new chip's patent holder was suing producers of competing technologies, such as Micron. The outcome, though imponderable, introduced another analytical complexity beyond the question of a mere economics-based earnings recovery.*

- And believe that competition from Taiwan, Singapore and Japan would abate.
  - *Except those companies were supported by their governments as a matter of national policy.*
  - *An investor would also have to believe that China would not constitute a significant threat to Micron over the next three to four years.*
- That the price of Micron's memory chips would fully recover from their 70% decline.
  - *This would require a greater than 3x price increase. Or, in the absence of a chip price recovery, it would require Micron to lower its manufacturing cost by 70%.*
  - *However, that would not result in growth, just standstill.*
  - *Meanwhile, the per-Megabit price of memory capacity for fiscal 2001 was estimated to be down 60% from 2000, and 75% from 1998. In order remain competitive, the combined total of capital expenditures and manufacturing and R&D expense would have to rise, not be reduced.*
- And believe that earnings could recover enough to support the stock price.
  - *The highest ROE ever recorded at Micron, 44.5%, was in 1995. If that exceptional profitability level were applied to 2001's shareholders' equity, and if the shares were to trade at the same 9x P/E as in 1995, the share price would indeed rise somewhat above the existing price. For the 10 years prior to 1999, Micron's average Price/Sales ratio was 2.1x, roughly one-quarter to one-half of the existing valuation.*

Unsolicited quote from an employee who browsed the HK archives for these reports:

*"There are lots of good reads from this folder. If you remove the year and company names, you'd think they were written in the present day. "*

Stated differently, holders of Micron Technology in 2001 would achieve a modestly positive return if it recovered to a record level of profitability briefly witnessed only once in the company's history. For more than a modest return, they would have to rely upon a sustained level of that record profitability and on a sustained bubble-level valuation applied to those profits.

That was the result of the Absurdity Nullification App for the fully-accepted bull case for the stock.

As to what happened afterward, Micron declined over 80%, and did not regain its July 11, 2001 short-sale price until September 2017, sixteen years later. Since that year, it nearly tripled, and in the past few weeks has been reaching successive record highs. Nevertheless, its annualized return for the nearly 23 years since July 2001 has been only 5.25%. From its July 2000 peak, its annual return has been 1.0%.

The Absurdity Nullification App was applied to all of the aforementioned short-sale recommendations, and also to today's IT and AI version of technology stocks. If you decide to use the app yourself, remember that once it's tuned to the proper industry sector context, all you have to do is read the numbers. It can apply to Micron in 2024—or to Nvidia or Apple—as easily as it did to Micron in 2001.

#### 4.7 Million Reasons Why Nvidia's Artificial Intelligence (AI) Chip Dominance Will Be Nearly Impossible to Topple

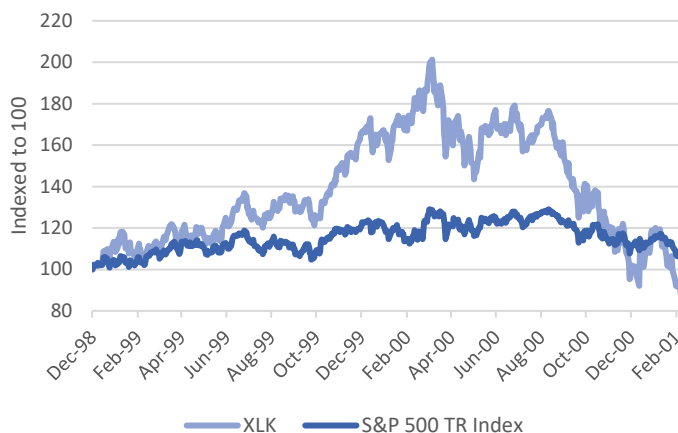
Nvidia has a huge competitive advantage that will make it extremely difficult for Intel, Advanced Micro Devices, or others to knock it out of its No. 1...

Motley Fool • 6 hours ago NVDA -1.01% INTC -1.30%



*Some excerpts from our March 2001 short sale report on the technology sector:*

This report (pictured below) followed a 56% decline in the technology sector—after the Technology Select Sector SPDR Fund (XLK), had already erased a 96% gain from its December 1998 inception date, and was 19% below its inception value. The S&P 500 was actually marginally higher than in year-end 1998. Naturally, this posed the evergreen question: To Buy, or Not to Buy?



## THE DEVIL'S ADVOCATE REPORT

Editorial Content—Horizon Research Group, 342 Madison Avenue, Suite 702, New York, NY 10173 (212) 499-7722  
Sales and Administration—Institutional Research Services, 55 Liberty Street, Suite 13C, New York, NY 10005 (212) 233-0100

March 12, 2001

A Profound Question:

### Will Technology Companies Be Restored To Their Former Luster?

This is, of course, the quintessential question that now confronts every portfolio manager. If one owns no technology shares and these shares resume their upward progress, then severe underperformance with all of its attendant consequences will be the result. On the contrary, if one chooses to own such shares, even in underweighted fashion, the price deterioration from bubble deflation might be so severe as to virtually assure a highly negative investment result despite what might be accomplished in other sectors of the portfolio. In fact, if the negative scenario were to transpire, it might so alter investor confidence as to increase the risk premium on all equities since there are still obvious segments of the U.S. equity market that have yet to experience a very negative investment result. Thus, the current investment climate is fraught with danger for professional investors and, therefore, requires very serious thought.

#### Earnings Restoration Scenario—Leading Technology Firms

	Presumed Fiscal 2002 Profits	Price at 10x P/E	% Change from Current Price
Dell Computer <sup>1</sup> .	\$0.84	\$8.40	(64.6)%
Intel	\$1.52	\$15.20	(48.9)%
EMC	\$0.79	\$7.90	(77.4)%
Oracle <sup>2</sup> .	\$1.06	\$10.60	(35.3)%
Sun Microsystems <sup>3</sup> .	\$0.57	\$5.70	(67.3)%
IBM	\$4.45	\$44.50	(55.2)%
Hewlett Packard <sup>4</sup> .	\$1.81	\$18.10	(40.2)%
Compaq Computer	\$0.34	\$3.40	(81.6)%
Lucent <sup>5</sup> .	\$0.37	\$3.70	(70.2)%
Lucent (using 9/99 profits)	\$1.22	\$12.20	(1.6)%
Microsoft <sup>6</sup> .	\$1.71	\$17.10	(69.8)%
Cisco <sup>7</sup> .	\$0.38	\$3.80	(81.6)%
Corning <sup>8</sup> .	\$0.64	\$6.40	(76.3)%
Analog Devices <sup>9</sup> .	\$1.59	\$15.90	(59.9)%

Our review simply applied a version of the Absurdity Nullification App. It presumed that the federal government would apply aggressive fiscal and monetary policy to restore the leading technology companies' prior record profits of 2000, contravening analysts' drastically reduced profit projections. And that this would be entirely successful. In other words, we went more bullish than the bulls.

The other assumption was that these bullish earnings would be valued at a conventional cyclical P/E ratio of 10. After all, if government intervention were required to restore an industry's earnings, that industry must perforce be cyclical (whether or not investors deemed it to be a growth industry).

The suggested results in the accompanying table: losses in, generally, a range of 50% to 80%.

In the ensuing two years, these were the actual results:



## Our Technology Investing Bona Fides – Part I

Hopefully, this review hasn't revealed an animosity or religious passion against tech stocks. If we belong to any sect, it would be a rare and old one, the Dispassionate Agnostics. Many new technologies are truly exciting, with world-changing potential. As *technologies*.

Perhaps the major error in technology investing is a confusion of terms. As our Chairman Murray Stahl is apt to say, language corrupts thought. *Almost no one actually invests in technology*. That's Thomas Edison and Elon Musk territory. What people invest in are *public corporations* that are developing or buying or selling a technology.

And as far as the **business** of technology goes, there's nothing new in the realm of human behavior. That is, nothing new about the *development, the funding, commercialization, private capital raises, the public IPO and follow-on offerings, product supply/demand dynamics, market sector size limitations, the success-fuels-its-own-competition cycle and associated margin pressure and/or displacement risk, and the inevitable demand saturation and incipient industry cyclical*ity. Those are well-worn pathways. Which means that no matter how exciting the thing they're selling, basic business valuation analysis and discipline are not invalidated or passé. And the App can always be updated with a professional tune-up.

Our dispassionate *appreciation* of a technology company that's priced to be a good investment is as old as Horizon Kinetics itself. One of the first three internet-focused funds in the history of the world, and the only one devoted purely to internet stocks, was the Horizon Kinetics Internet Fund, which began in late 1996.

Our first buy recommendation for a technology stock was in January 1998, for CMG Information Services (CMGI). This was before the internet was seriously "discovered" by Wall Street. That attention vacuum permitted a company like CMGI to trade as a true value stock (see valuation box).

In December 1997, the end of the Internet Fund's first full calendar year of operation, CMGI was almost an 8% position.

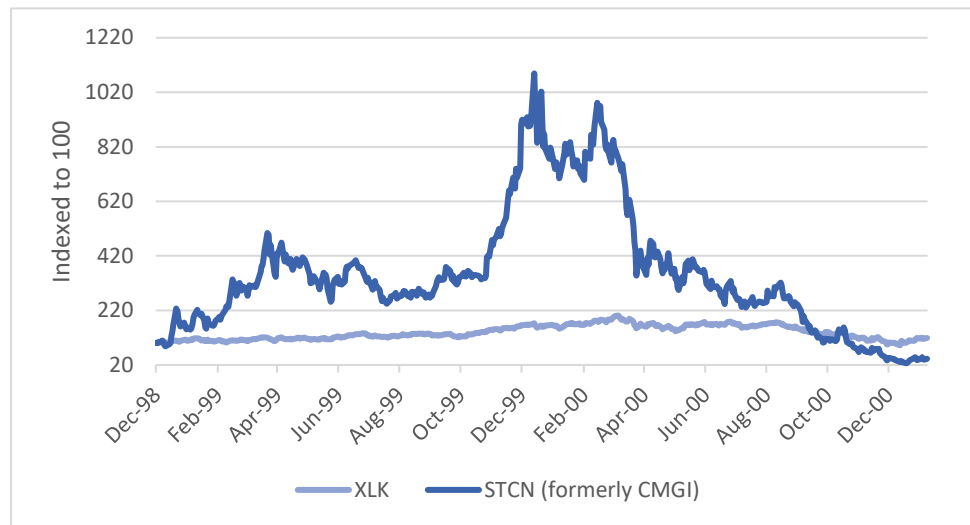
Not long after, internet stock fever seized Wall Street, and the hunt was on for every next best bet. CMGI was the distillation of everything internet investors could want: huge alpha potential (or is it beta?), sexy risk and lotsa return. A Dot.com IPO incubator company!

By year-end 1999, the Internet Fund had scaled back its CMGI position to 5.7%, then to less than 1.5% by June 2000. At that point, the stock was down 67% from its high but, incredibly, was still up over 26x from its December 1997 price. The position was closed before the end of 2000.

#### The CMGI Investment Thesis Was Amazingly Simple

- CMGI was a cash rich company that over a period of years helped fund a series of internet start-ups.
- Valuation: Its net balance sheet cash and stock market value were almost entirely equaled by the market value of the first of its investments to go public.<sup>1</sup>
- The remainder of CMGI—a portfolio of internet venture capital investments at various stages of development, some already preparing for an IPO—was essentially free.
- Unlike Micron's win/lose profile, CMGI's stock price—oh, excuse me, I meant to say *valuation*—paired limited downside risk in the existing, under-the-radar circumstances, with a portfolio of pre-IPO startups that represented pure upside optionality.

CMGI: Let's just say...it beat the *pants off* the tech sector benchmark!  
(In both directions!)



Look, it's not our fault that tech stocks are usually priced like lottery tickets. Show us a good one, though, and "we're in." The reveal for our recent way-more-better IT stocks will come a bit later.

## *If You Have a Lottery Ticket Problem, You're Not Alone.*

The vibes of 1999 and 2000 harmonize with today's tech bubble tunes, the new hits being IT and AI-related stocks. Which also rhyme with lottery tickets. A few words about lottery tickets before getting to the now record level of technology sector concentration and some portfolio tools to address that risk.

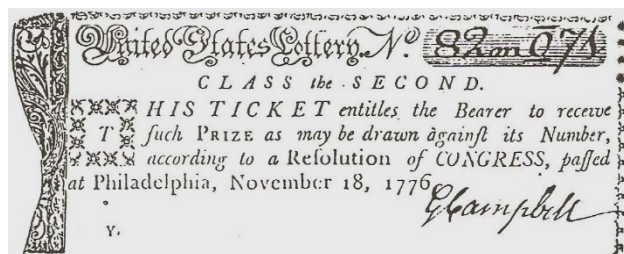
About 50% of Americans buy a lottery ticket at some point during the year, but a large portion do so only when the prize is inordinately large. In the U.K., up to 70% of the population are regular buyers.

As a business model, selling lottery tickets to the public is *waaay* more profitable than creating an operating business and selling shares to the public. The most profitable, least-efforts way of making money is seigniorage. Unfortunately, it's not available to the public investor, seigniorage being the prerogative of governments. (There is one exception, cryptocurrency mining, still in its formative stages, which we also do at Horizon Kinetics.) Seigniorage is so profitable because it's actually, physically manufacturing money. Beyond the one-time fixed cost of the printing press, and the 10 cents of raw materials cost in a \$20 bill, it's all profit.

Isn't it interesting, then, that one of the most profitable alternative ways of making money is running a lottery, which is also the prerogative of governments. In this case, the government repatriates money it made for near-free in the first place. One would think that that the manufacturing cost of running a lottery isn't radically different than the cost of printing it.

The U.K.'s National Lottery collected £8.2 billion last year. Its operating costs were 4% of revenue, and commissions to retailers were 3%. That's a raw profit margin of 93%. However, 57% was awarded to winning ticket holders, leaving 36% for the government to mete out for various social programs it would otherwise have to fund through direct taxes. Still, 36% is a Microsoft-level profit margin.

Perhaps that's why national lotteries as a government fund raising tool are a business model that has survived for 2,000-years. The American colonies imported them from England. If it were an investable asset class, lotteries would be a global diversifier. Even during recent periods that don't much pre-date the classic Ibbotson & Sinquefeld asset class return statistics, one can find February a 1799 lottery ticket from England; a U.S. Lottery ticket, passed by a Resolution of Congress in November 1776; and one from the Banque du France in July 1884.



The 11th of February, 1799,  
THE  
**ENGLISH LOTTERY**  
BEGINS DRAWING.

ENGLISH LOTTERY, 1798.			THE FOLLOWING CAPITAL PRIZES	
SCHEME.			Have lately been SOLD AND SHARED AT THIS OFFICE:	
No. of Prizes	Value of each	Total Value	No. 24806	a Prize of 30,000 Pounds
3	£80,000	is £240,000	279	20,000 Pounds
4	10,000	40,000	7108	20,000 Pounds
5	5,000	25,000	10496	20,000 Pounds
5	3,000	15,000	17456	20,000 Pounds
10	1,000	10,000	30343	20,000 Pounds
15	500	7,500	34114	20,000 Pounds
30	100	3,000	34800	20,000 Pounds
100	50	5,000	40196	20,000 Pounds
16,900	20	338,000	174	10,000 Pounds
17,072	Prizes	498,400	3085	10,000 Pounds
	First drawn Blank 1st Day	10,000	2767	10,000 Pounds
38,948	Blanks	600	7940	10,000 Pounds
50,000	Tickets	£500,000	10130	10,000 Pounds

Not two Blanks to a Prize.

**TICKETS AND SHARES**  
Are selling in Variety at the  
OLD STATE LOTTERY OFFICES OF  
**T. BISH, STOCK BROKER,**  
No. 4, CORNHILL, LONDON;  
AND AT  
**JAMES THOMSON's, Bookfeller,**  
**MANCHESTER.**

CORRESPONDENTS, by remitting Bank Notes, Post Office Orders, or Cash, may have TICKETS and SHARES sent them, and their Orders complied with, the same as if present.

TICKETS AND SHARES REGISTERED,  
To send the earliest Intelligence of their Fate to any Part of the World; and  
ALL LETTERS, IF POST PAID, DULY ANSWERED.

\*. All Business in the PUBLIC FUNDS transacted with Fidelity and Dispatch,  
\* The ensuing ENGLISH LOTTERY consists of 5000 left Tickets than last Year;  
The lowest Prize is Twenty Pounds, and  
**NOT TWO BLANKS TO A PRIZE.**

**TIRAGE DÉFINITIF**  
DE LA  
**LOTÉRIE TUNISIENNE**  
Les Fonds sont déposés à la Banque de France  
**LE 17 JUILLET 1884**  
**GROS LOTS:**  
**500,000 Fr.**  
En Cinq Gros Lots de 100,000 Fr.  
2 Lots de 50,000  
4 Lots de 25,000 | 100 Lots de 1000  
10 Lots de 10,000 | 200 Lots de 500  
**AU TOTAL 321 LOTS FORMANT UN MILLION DE FRANCS**  
Le tirage aura lieu à Paris, les lots seront payés en espèces au Siège du Comité.  
**PRIX DU BILLET: UN FRANC**  
Pour obtenir des billets, adresser en espèces, chèques ou mandats-poste, la valeur des billets à **M. Ernest DÉTÈRE, Secrétaire-Général du Comité, 18, Rue de la Grange-Batelière, Paris.**

In the year before the start of World War II, both Nazi Germany and the French National lotteries were active and functioning—as they continued to during the war.

Gesetzlich für das ganze Deutsche Reich  
**GELDLOTTERIE**  
**Deutsche Rote Kreuz**  
Preis 50 R Pf.  
einschl. Lotteriesteuer  
116636 Gewinne im Gesamt-Gewinn von  
**275 000 00 RM**  
ORIGINALLOS  
No 416693 \* B  
ZIEHUNG 20.-22. SEPTEMBER 1938

**BON DE PARTICIPATION**  
**LOTÉRIE NATIONALE**  
1938  
N° 0.429.748  
2<sup>e</sup> Tr. 0.429.748 2<sup>e</sup> Tr.  
**1**  
**100<sup>e</sup>**  
TALON A DECOUPER ET A CONSERVER  
TALON A ADRESSER pour le PAIEMENT des LOTS

As an investable asset class, lotteries would have extended to emerging markets. The Belgian Congo Colonial Lottery began operating in 1934, more than 50 years before the Templeton Emerging Markets fund provided public access to such jurisdictions.

One would think that governments would be loath to give up 50% to 60% of their lottery revenues to the winning ticket holders. But the awards are an unavoidable cost of production. A succession of lucky winners must be continuously manufactured in order to induce continued demand. Presumably by exciting the reward-anticipation center of the potential buyer's brain enough to overwhelm that portion of the pre-frontal cortex responsible for weighing risk and reward (and the longer-term consequences of near-term actions).



Far be it from us to suggest that any such deficit of probabilistic reasoning of long-term costs and returns figures into investors' decisions to put capital at risk in technology stocks during periods such as this one. There are many different ways to invest successfully. So far, this cycle, there have been multitudes of successful technology sector investors.

## Today's Technology Sector Risk

### First, Concentration

The stock market's most visible problem, worn plainly on its face, is its technology sector concentration. What can one say about it in just a few words? One can say *nonpareil, incomparable, historically unique*. These are superlatives, but not the good kind. As officially presented, the tech sector now matches the Dot.com bubble weight, at 29%. But functionally—removing a few semantic fig leaves—the tech sector is at least another one-third higher, 40%. Other than that, there's not much to say. That's most of what one needs to know. The rest is commentary, subtleties and variations on one theme.

		S&P 500 Info Tech Sector	AMZN (Consumer Disc)	META (Comm)	GOOGL (Comm)	S&P 500 IT Index + AMZN, META, GOOGL
2024	Now	29.5	3.9	2.6	3.9	39.9
2023	If Dot.com was white hot, what's this?	28.9	3.4	2.0	3.8	38.1
2020	And, they're off!	27.6	4.4	2.1	3.3	37.3
2015	Add some Tech by Another Name	20.7	1.5	1.3	2.5	26.0
2010	Warming up again	18.7	0.7	0.0	0.8	20.1
2005	Post flame-out cool-down	15.1	0.1	0.0	0.5	15.7
1999	White hot	29.2	0.2	0.0	0.0	29.4
1997	Things heat up	12.3	0.0	0.0	0.0	12.3
1990	In (a little past, really) the beginning	6.3	0.0	0.0	0.0	6.3

In 2018, Facebook and Alphabet were reclassified from Information Technology to Communications Services. Despite being categorized as Consumer Discretionary, 67% of Amazon's operating income is from its Cloud data centers and services, including use of its own semi-conductor chip. And Meta and Google are in the Communications sector, along with Verizon. Yeah, but do we believe the index sector ministry or our lying eyes?

One of the limitations of the volatility and correlation statistics used in portfolio asset allocation models is that they measure historical price behavior over a period of years. That abundance of data lends confidence that it is predictive. The beta of the iShares U.S. Technology ETF is measured over three years. However, during a long period when both tech stocks and the stock market are generally rising, they behave quite similarly, even if tech is outperforming overall. That doesn't capture much data about negative share price behavior. It is during the inevitable episodic crises when the tech sector might differ radically from the rest of the market in a way that is absent from the 3-year correlation figures.

It shouldn't be outlandish to suggest that the S&P 500 now incorporates the idiosyncratic risk-equivalent of a 40% weighting in a single stock. Well, some would argue that this is an extreme suggestion. Nevertheless, call the current version of the S&P 500 what you will, and use it how you like, but you can no longer say that it is a market index or diversified or an appropriate core asset allocation building block. At least not according to the precepts of modern portfolio theory and indexation.

### Valuation and Growth

As to valuation risk, rest assured that the IT sector didn't get to here through "growth." It got here through price inflation: more people paying more and more for the same shares—for years and years.

An excerpt from our Under the Hood series: “What’s in Your Index? The New, Bigger, Better, Updated IT and AI 2023 Edition!”<sup>1</sup>

*Moreover, the weight of money flows became a kind of limitation (but a limitation with side effects). Indexation’s marginal bid became focused on a narrower and narrower subset of the security universe, on those shares with the institutional-grade trading liquidity to absorb those flows. And, in a self-reinforcing cycle, that narrower subset of securities absorbed an ever-greater proportion of the ever-increasing inflows. This distorted valuations and index security and sector weights in ways that were de-linked from fundamental analysis and valuation. At least, those were some of the questions for debate at the time.*

It was just about ten years ago, when the current technology stock bubble began, that those companies began to persistently and markedly outperform the S&P 500. For the ten years through year-end 2023, the iShares U.S. Technology ETF returned 19.7% a year. WowWee! That’s pretty darned exceptional. Those companies must have been growing like mad. They must have benefitted massively from the boom in Cloud data storage and computing. And of the rapid adoption of innovative smart phone capabilities and mobile connectivity. And of Big Data Set gathering and personal information monetization by social media and retail shopping platforms like Facebook/Meta, Google and Amazon.

Let’s see just how fast these companies have been growing. Hmmm, that’s odd. Earnings per share up only 9.2% a year?

It is well-known that technology company earnings are heavily distorted by the accounting for stock and option compensation, albeit in ways that enhance stated results. So, how about Book Value per share? Up only 6.3% a year? Well, that can be distorted downward by the accounting conventions for share repurchases. A truer measure should be free cash flow per share. Whaat? Only 7.9%/year?

S&P 500 IT Sector Growth Rate	
10 Years, 12/13 to 12/23	Annualized
Earnings/share	9.2%
Book value/share	6.3%
Free cash flow/share	7.9%
Sales per share	7.0%
IT Sector Index Return	20.1%
S&P 500 Index Return	12.0%

Ah, how about, sales per share? Because sales don’t lie. Even so, no go. The past decade’s sales gain for the S&P 500 IT sector was only 7.0%/year. So how did that 20% rate of return happen?

The P/E ratio of the IT sector stocks more than doubled, from less than 15x earnings in 2013 to over 36x. The Price/Sales ratio rose from 2.6x to 7.6x, close to a triple. These numbers mean that the annualized increase in how much investors paid for a dollar of

IT Sector Valuation Change			
10 Years, 12/13 to 12/23	Cumulative	Annualized	Ending vs Start
Change in P/E ratio	138%	9.4%	36.5x vs. 14.8x
Change in P/S ratio	174%	11.4%	7.56x vs. 2.56x

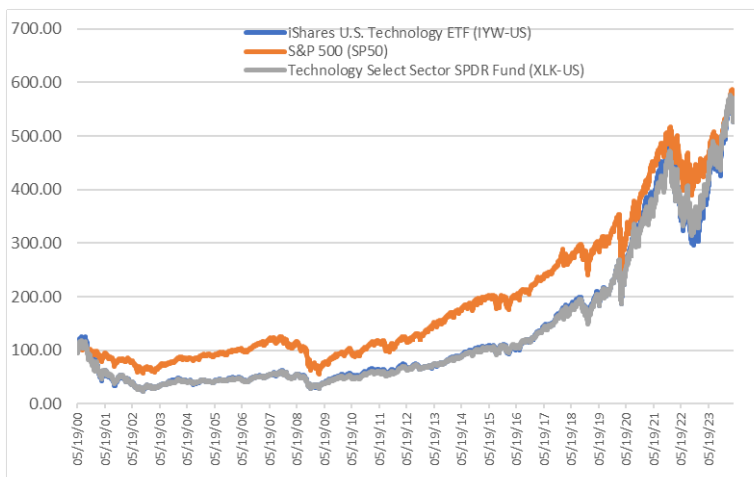
Source: Bloomberg, Factset. S&P 500 IT Sector Index financial ratios are based on constituent data calculated by FactSet Market Aggregates, and may deviate from actual index weights.

<sup>1</sup> <https://horizonkinetics.com/whats-new/#james-davolos-presents-at-the-cfa-ben-graham-10th-annual-conference-june-20-2023>; [https://horizonkinetics.com/app/uploads/AMAGF-Bubble\\_Sep2020\\_FINAL.pdf](https://horizonkinetics.com/app/uploads/AMAGF-Bubble_Sep2020_FINAL.pdf)

IT stock earnings and a dollar of sales rose, if you just average the two metrics, by over 10% a year. That's where the perception of growth—share price appreciation, which was higher than the actual business growth—came from.

Paradoxically, this wave of concentration and valuation risk occurred in the name of indexation, the original and still espoused purpose of which is solely to ensure the highest degree of diversification and to eliminate idiosyncratic risk. It is upon this idea that the majority of stock market assets are presumed to be managed.

## *Final observation on the technology sector today:*



## *And on the lottery:*

Lotteries are global and their marketing slogans can also reveal somewhat different cultural vibes, such as between the U.S. and German versions.

### United States

- Hey, you never know.
- You gotta be in it to win it.
- Fortune favors the bold.
- Don't miss out.

### Germany

"Play to Win the Number Lotto. Perseverance Leads to the Goal."

I still think they rhyme with "tech."

Ad on the back of a 1957 German postage stamp cover.



## Portfolio Construction When the Market Itself is the Risk

### A Conformity Problem – Institutional Needs vs. Creative Thought

That a portfolio's industry sector diversification should pretty much reflect the S&P 500 is a relatively recent notion. Yet, it has taken such a deep hold as to be doctrine. 'Pretty much' means it wouldn't be considered wrong for an actively managed portfolio to moderately overweight or underweight an industry sector. That's actually required if an active manager is to avoid being labelled a closet indexer.

A larger divergence, like an 8% Energy weight instead of the S&P 500's 4%, or 20% in Information Technology instead of 30%, can be justified if it's an expression of a strong analytical point of view. But if a large investment manager, of the type often in the news for its market views, were to have a 5x index weight—say 20% in Energy—that would be cause for an excited round of cable TV "energy bet" interviews. To have zero percent in Information Technology these days is probably almost unheard-of.

That's a high level of conformity for a system that seems tailor made for constant innovation and novel strategies: It's the come-one-come-all securities trading markets! The drum-beat pressures of the day-to-day battle to attract clients and assets, under everchanging market conditions...that should be a hot crucible for creative thought. New investment ideas would filter up to management through the almost 75,000 analysts in the securities, commodities contracts and other financial investment sectors, and the more than 35,000 company and enterprise management sector analysts.<sup>2</sup> It's an industry that pays the highest and hires the best.

Paradoxically, it's the "highest-and-best" aspect that might be part of the reason for the conformity. Consider the possibility that a job that's too good could be innovation-*suppressing*! These next tidbits are all quoted or paraphrased from a 2021 CNBC article about the ground-floor elite hires at the largest Wall Street firms. It focuses on investment banking, but the point is transferrable to investment management<sup>3</sup>:

That year, [one Bulge Bracket Investment Firm] received almost 50,000 applications for about 400 internship positions at its investment banking program. That's more selective than Harvard or Yale.

When junior bankers in [another Bulge Bracket Investment Firm] internal survey complained about what they called "inhumane" working conditions and new recruits' 90-hour work weeks, one incoming analyst wasn't fazed. "The most important thing was financial security," he said. "You are willing to put in whatever hours, and at the end of the day it's totally worth it."

Rising student debt levels had made recent graduates more risk-averse. "If I have to basically sell my soul to this bank for a few years, I need to be paid for it," said a first-year banker at [yet another Bulge Bracket Investment Firm]. "There are a million students who are all deserving, but there just aren't enough spots; they would kill for this opportunity."

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<sup>2</sup> <https://www.statista.com/statistics/935969/employment-of-financial-analysts-usa-by-industry/>

<sup>3</sup> <https://www.cnbc.com/2021/08/19/why-college-graduates-flock-to-wall-street-jobs.html>

In an earlier era, when investment banks were more likely to be staffed with the well-connected offspring of wealthy families, these fresh Wall Streeters would have been known as PSDs—Poor, Smart outsiders with a Deep desire to become wealthy.

The reality of incentive and disincentive systems is that, if the stakes are high enough, you do what your boss wants from you.

So, what do the big investment firms want from their employees? The firm needs to gather more fee-generating assets. It does that by advertising its superior performance relative to a market index or an index of its peers. As a new employee, that's exciting, yeah? You think the job detail is to generate new ideas, like an unorthodox way to generate income; or take advantage of a temporary pricing anomaly in a certain market sector, like deeply discounted utility bonds or preferred stocks; or a way to produce a higher long-term return by exchanging near-term performance stability relative to the S&P 500 for more-discounted longer-term opportunities. Oh, the possibilities!

Such an employee would quickly learn that this is exactly NOT what the boss wants.

- First lesson, **relative performance risk**. Any meaningful portfolio allocation departure from the index or peer benchmark has the possibility of outperforming, but it must certainly underperform during some periods. If it no longer looks like the index, it can't match it quarter to quarter. What happens when the index is up and this inspired new strategy is down? From a marketing and asset gathering perspective, underperforming is much worse than being average or undifferentiated. Outperform and for a time you *might* attract more assets; underperform, and you *will* lose assets.
- Then there's **time risk**. What about, argues the eager, ambitious young employee, the possibility of establishing longer-term, franchise-building outperformance? "Wasn't that what famed value investor Peter Lynch did at Fidelity's flagship Magellan Fund?" - asks the newbie of her supervisor. "He started as a \$16,000-per-year analyst and was eventually worth over \$300 million! And how about what contrarian value investor John Templeton did at the Templeton Growth Fund? They did something entirely different than the market and built real companies from that long-term performance."

The problem that today's young analyst faces is that her employer's marketing is built around this year's and next year's results, especially converging on the 4<sup>th</sup> quarter. A decade's result, no matter how superior in the end, will span multiple interim periods of underperformance. Ten years might as well be forever in the new employee's supervisor's career and in that supervisor's supervisor's career. As the supervisor might respond, "Maybe your fund *would* outperform, but you won't be working here long enough to see it!" There will be no waiting.

This was explained more succinctly in a 1998 article not too long after the third successor to Peter Lynch took over the Magellan Fund. The Fund's extraordinary 13-year performance under Lynch had indeed helped build Fidelity into a major firm. By Lynch's retirement in 1990, the Fund's assets had expanded from \$18 *million* to \$14 *billion*. When Robert Stansky took over, years later, assets exceeded \$70 billion and Magellan was probably the world's largest mutual fund of that heyday.

Mr. Stansky was charged with re-shaping the fund to be more conventional: reducing its bond position, adding larger and more growth-oriented stocks. An investment planner interviewed for the article said, "A fund that has \$70-some billion in assets has to behave something like the market

unless the manager does something unwise, which is what happened to Magellan a few years ago.”<sup>4</sup> The Fund began to so resemble the S&P 500 that a later academic analysis of it is reputed to have helped coin the phrase “closet indexer.”

- Plus, the *institutional limitations of large scale*. If a perfectly good valuation opportunity exists, with a truly superior expected return, it will be rejected if the total investable amount is insufficient to justify the cost or be relevant to the institution. This might occur in a specific market sector, such as electric utilities during a temporary crisis. There might be many hundreds of millions of dollars of deeply discounted utility bonds trading at very low prices, very high yields, and with unusual safety factors because of the regulatory framework in which they operate. Ideal for a total-return income strategy.

The business calculation, though, will revolve around how much of those bonds are available to buy, how much client money can be raised for the strategy, how much annual fee revenue can be expected, and for how many years. That type of market anomaly will tend to dissipate within a couple or few years. The answer will likely be: Not enough beginning dollars of AUM, and not for enough years of fees, to pay for the analysts, managers, and overhead allocations. Business performance outweighs investment performance.

- A related, but very important lesson: *market cap and trading liquidity as limiting factors*. The smallest of the top 10 asset managers in the U.S. has well over \$1 trillion of AUM; the others are many times larger. Companies without sufficient market value or trading volume to be relevant aren't, therefore, um, relevant. In a \$500 billion fund, merely a 0.1% position (1/10 of 1%), would be \$500 million. The maximum proportion of any company that the fund advisor is willing to own, so that it doesn't have to make SEC filings as a beneficial owner, is 5%. That means the fund won't buy any companies smaller than a \$10 billion market cap. There are further limitations for trading liquidity—how quickly a position can be liquidated.

As a new employee, you begin to understand what's wanted of you. Creative expression is irrelevant if it's not implementable on a large-scale basis. This is objectively observable in the marketplace.

There are ways to try to achieve much broader indexed diversification than the S&P 500. There are funds like the Vanguard Total Stock Market Index Fund, which holds over 3,700 stocks. Guess what the Information Technology weighting is? (Guess first, don't look....)

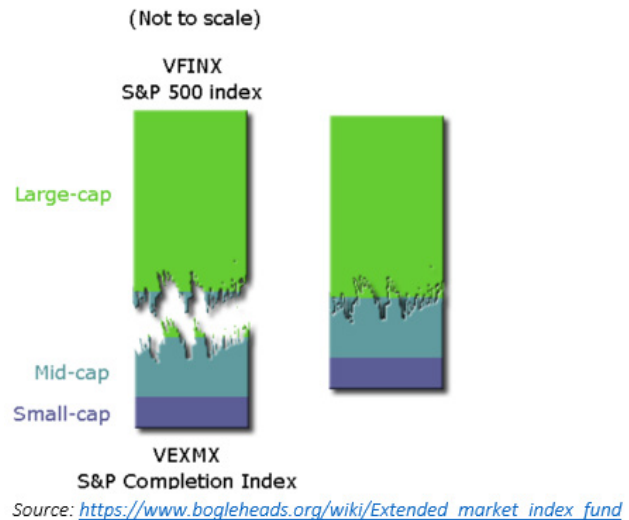
It's 29.5%, and close to 40% if you include the closet tech giants. You can hardly escape it. That right there shows the scale limitation problem if you're managing \$370 billion, which is how much is in this Fund. In order to deploy that much capital, the index must select stocks with sufficiently large market values. Otherwise, all that money would swamp the smaller companies in the index. The *median* market cap of this Fund—not the average, but the company in the middle—is \$160 billion.

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<sup>4</sup> <https://www.investmentnews.com/industry-news/archive/the-giant-is-out-in-front-at-least-for-nowcan-fidelity-magellan-sustain-its-hot-streak-888#:~:text=He%E2%80%99s%20also%20trimmed%20the%20number%20of%20stocks%20by,Merck%20%26%20C o.%20Inc.%2C%20Citicorp%20and%20Cendant%20Corp.>

There are more than \$13 trillion of passive ETF and mutual fund index mutual funds. They can handle a lot of AUM.<sup>5</sup>

Much better index-based diversification without the IT sector concentration risk can be had with a completion index, sometimes known as an extended market index. It includes substantially all the stocks in the market except for those in the S&P 500. The Wilshire 4500 is probably the best known, along with Vanguard's Extended Market ETF (VXF). For these funds, the IT sector weight is 18%.



### The Conformity Performance Problem

Believe it or not, the performance of the stock market *WITHOUT* the leading technology stocks is far superior. From the December 1999 peak of the Dot.com Bubble to now, the Wilshire 4500 returned 7.9% a year. The S&P 500 returned 7.4%.

However, those S&P 500 returns include the benefit of the current IT bubble. To reduce that bias, here are the 15-year returns from year-end 1999 through 2014, just a few years into the current bubble: Wilshire 5000: 6.5% per year and the S&P 500: only 4.2% per year.

Annualized Performance	SP500 SPDR ETF	Wilshire 4500 Index	XLK IT Select ETF
2000-4/19/2024	7.0%	7.6%	6.6%
2000-2014	4.2%	6.5%	-0.7%

Source: Factset

It has just been demonstrated that:

1. There is an index that has seriously outperformed the S&P 500 over the course of decades,
2. It is available to anyone who wants it
3. It is more diversified than the S&P 500, and excludes the IT sector concentration risk.

Item 1) Is what investors self-identify as fervently seeking. Item 2) Says they can have it, and Item 3) Is something they most definitely should have. With this trifecta of positive factors, what swollen rivers of money have flowed into these various funds?

In the U.S. domiciled ETF and mutual US Equity universe, there are 11 "extended market" funds. Their cumulative AUM is \$147 billion. There are more than seven thousand U.S. equity ETF and mutual fund,

<sup>5</sup> Source: Morningstar. It's Official: Passive Funds Overtake Active Funds  
<https://www.morningstar.com/funds/recovery-us-fund-flows-was-weak-2023>

with aggregate AUM of \$14.4 trillion. This means only 1% of total equity ETF assets in the U.S. are in extended market funds. iShares has no completion fund. Vanguard and Fidelity do.<sup>6</sup>

Even with this reduced scale of assets, these completion funds are hardly as diversified as their mandates suggest. Believe it or not, if you were to go the Vanguard website and get a list of all 3,553 stocks in VXF, and start at the bottom to see what the smallest weights are, they would be 0.00%. Scroll up that 355-page list and all you'll see are zeros. Not until you get to the 1,868<sup>th</sup> largest position will you see a weight as large as 0.01%. Nearly 50% of the Fund holdings are listed as a 0.00% weight. The 0.00%-weight market caps range from about \$0.5 million to \$11 billion.

There are another 627 stocks with a 0.01% weight. To be fair, an equal weighting across all 3,553 companies would average to a 0.03% weight. The largest 10 positions range from 0.63% to 1.03%.

And that's fine. No one is pulling a fast one. The smallest ten positions sizes average about \$225,000. Their market capitalizations average about \$11 million, so the Vanguard fund owns, if you round up, about 2% of those companies. In practical, implementable terms, it's reasonable. It abides the limitations of indexing thousands of securities.

For instance, from among some of our strategies, and from among other important holdings, positions such as Permian Basin Royalty Trust, Mesabi Trust, and Sabine Royalty Trust are not included even in the Vanguard Extended Market ETF.

## VXF Vanauard Extended Market ETF

### Holding details

as of 03/31/2024

Ticker	Holdings	% of fund	Shares	Market value
BHRB	Burke & Herbert Financial Services Corp.	0.01 %	95,576	\$5,355,123
ITOS	iTeos Therapeutics Inc.	0.01 %	391,052	\$5,333,949
LYEL	Lyell Immunopharma Inc.	0.01 %	2,391,088	\$5,332,126
BMEA	Biomea Fusion Inc.	0.01 %	356,387	\$5,327,986
RILY	B. Riley Financial Inc.	0.01 %	250,173	\$5,296,162
SMHI	SEACOR Marine Holdings Inc.	0.01 %	379,392	\$5,288,724
CBUS	Cibus Inc. Class A	0.01 %	235,017	\$5,278,482
AXGN	Axogen Inc.	0.01 %	653,620	\$5,274,713
UIS	Unisys Corp.	0.00 %	1,066,805	\$5,238,013
DSKE	Daseke Inc.	0.00 %	630,937	\$5,236,777

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<sup>6</sup> Source: Morningstar Direct. Data as of 4/23/2024. Universe includes US Equity domiciled in the US.

## Client Questions About Our Concentration and What it is That We Really Do

### Long Horizon Investing and Compounding

All we really do is take the opposite side of the time risk decision that the professional investment community does. They need high near-term returns and won't take the risk of underperforming their benchmark while waiting: look like the market to not underperform the market.

We want securities that offer a suitable *long-term* return. We'll take the time risk—and the discount that's usually offered to take it—that other investors don't want, because a long time horizon gives us better odds of being right. How can a ten-year estimate be more reliable than a one-year estimate?

Let's take one end of the spectrum first. If a shorter time frame truly makes return predictions more reliable, then the easiest way to earn a good return would be, every morning at 9:30 am, to just buy a stock or industry that will be higher by 4 pm. Most people would agree that's a bad idea, that the one-day direction of stock prices is unpredictably random.

Yet, most people seem to think that 365 days make prices very predictable, to judge by all the effort that goes into it. But, who's to say if interest rates or political upheaval, or a pandemic or war, won't make P/E ratios collapse in the coming year?

Now the other end. The natural rejoinder to our approach is that one can't predict interest rates or war 10 years out, either. True. Here's the answer to why 10 years is safer than one year, and to what we really, actually do.

We're compounders. How does that solve war, pestilence, and interest rate risk? Because enough years of compounding can make up for an awful lot of insults. If you own shares of a company that compounds *financially* at 15% for 10 years, and if the valuation multiple then contracts by 50%, one piece of good news is that the share price has still doubled, for an annual return of 7.3%.

The second bit of good news is that 7% is just the stock price return, not the financial return. The book value didn't decline, and book value is the asset base upon which future sales and earnings will continue to compound. The third bit of good news is that the low price might induce the company to repurchase a large quantity of shares, which would accelerate the compounding.

But if the 50% decline happens after only one year, you've had a 43% loss. If you can't take the time risk to await a recovery, you have to trade out of that security and find another one. That memorializes the loss, because the sale breaks the compounding chain, which has to start afresh. It's like not sticking with and paying down a 30-year mortgage.

In the early years of a mortgage, almost all of the monthly payment is for interest expense. That seems to hardly change for years and years. But there comes a point, and it's not even in year five or 10, when enough equity has been built up that the interest component shrinks rapidly and the principal paydown portion gets noticeably larger. It takes a long time to get to that tipping point.

*In the investment world, a 3- or 5-year holding period labels you a long-term investor. But you're not. If you were to trade out of your mortgage every five years, you could never get to that tipping point where compounding finally takes over and your equity builds rapidly. You start again from scratch.*

We want companies that can compound at reasonable rates for very extended periods. Among the best are asset-light businesses. Their compounding prowess will be made plain in these next tables.

For context for the perhaps startling returns about to be shown, most businesses face stresses that impede truly long-term compounding. It's a rare company, even for household names we grew up with, that escapes such pressures and maintains its profitability for many decades. They can have a very nice run for a while, but some have to reinvest most of their earnings in plant & equipment just to stay competitive. There isn't much left over for reinvestment and true growth. Or they reach the limits of market share expansion and become mature, perhaps have to migrate into other businesses. Or competitive challenges eventually constrict profit margins. The list goes on.

It's why the list of companies at the top of the S&P 500 undergo such a big makeover every generation.

The most profitable and best performing stocks you'll ever find, which have outperformed pretty much every index over the past 20 and 30 years, are essentially unknown to the investing public. Here are a couple, shown in two steps.

The first table shows the 20-year returns of the 30 longest-existing equity ETFs. Their average and median return—the ETF in the middle—are about identical, 7.5% and 7.9%. The best returns are from Invesco QQQ Trust, which is 65% technology, and the Technology Select Sector SPDR Fund: 13.7% and 13.4%. The S&P 500 ETF was 9.6% a year.

The comparison stocks are **Mesabi Trust**, an iron ore royalty company, and **Sabine Royalty Trust**, an oil royalty. They were chosen simply because they have suitably long, unbroken operating records. Their 20-year annualized returns are 15% and 13%.

If performance were the measure of market demand, Mesabi and Sabine should be among the hottest stocks in America. They are almost unknown among the investing public. Mesabi's ETF ownership, by only three funds, is \$5.73 million, of which \$5.71 million happens to be in the Horizon Kinetics Inflation Beneficiaries ETF. Sabine Royalty's ETF ownership, in five funds, is \$5.32 million, \$4.3mm of which, again by seeming happenstance, is in the Horizon Kinetics Inflation Beneficiaries ETF.<sup>7</sup>

If Horizon Kinetics didn't exist, we're talking about \$0.2 million and \$1 million of ownership by the entirety of the \$4.6 trillion U.S. domiciled ETF market. Fund management isn't really about performance, even if

#### Top 10 S&P 500 Companies by Market Cap

<i>Jan. 2024</i>	<i>Jan. 2004</i>
Apple	Microsoft
Microsoft	Exxon Mobil
Alphabet	Pfizer
Amazon	Citigroup
NVIDIA	General Electric
Meta/Facebook	Walmart
Berkshire Hathaway	Intel
Eli Lilly	Johnson & Johnson
Visa	IBM
Broadcom	Amer. Int'l Group

***\$17.685 Trillion**      **\$3,343 Trillion**  
**Annualized Market Cap Growth: 8.7%***

<sup>7</sup> Source: Factset Ownership Database

“performance” leads every discussion; it’s about the performance that can be achieved while managing trillions of dollars.

There are \$1.1 trillion in merely these 30 ETFs. Mesabi’s stock market value is below \$250 million, and Sabine Royalty Trust is \$930 million. Given the practicalities of asset accumulation and management fee sufficiency in the institutional market, Mesabi and Sabine are not “actionable.”

As good as these royalty returns seem, they’re even better than the first table suggested. The problem is relying on 20-year returns at this moment in history. The only two ETFs that approached the returns of the royalty companies were technology ETFs. That’s because 10 of the past 20 years encompassed a technology bull market that snowballed into a bubble. A better likeness to reality is depicted by the inception-to-date returns of these ETFs, which range from 25 to 30 years.

## Indexes vs. Hard Asset Companies, Round 2

	Years Since Inception	Inception through 12/31/23 Annualized Returns, %		
		ETF	MSB	SBR
SPDR S&P Midcap 400 ETF Trust	24.8	11.09	16.49	17.02
SPDR S&P 500 ETF Trust	25.1	10.00	18.03	15.55
Invesco QQQ Trust Series I	25.1	9.44	18.04	16.38
Consumer Discr. Select Sector SPDR Fd	25.1	9.33	17.82	16.13
iShares MSCI Mexico ETF	25.1	9.09	16.17	17.78
Technology Select Sector SPDR Fund	31.0	8.63	17.82	16.13
Health Care Select Sector SPDR Fund	28.7	8.57	17.82	16.13
SPDR Dow Jones Industrial Average ETF	27.8	8.50	16.87	16.17
Industrial Select Sector SPDR Fund	26.0	8.49	17.82	16.13
Materials Select Sector SPDR Fund	25.1	8.22	17.82	16.13
Energy Select Sector SPDR Fund	25.1	7.96	17.82	16.13
iShares MSCI Sweden ETF	25.1	7.82	16.17	17.78
iShares MSCI Canada ETF	25.1	7.78	16.17	17.78
iShares MSCI-Australia ETF	27.8	7.44	16.17	17.78
iShares MSCI Switzerland ETF	27.8	7.02	16.17	17.78
iShares MSCI France ETF	27.8	6.73	16.17	17.78
Utilities Select Sector SPDR Fund	27.8	6.73	17.82	16.13
iShares MSCI Spain ETF	27.8	6.68	16.17	17.78
Consumer Staples Select Sector SPDR Fd	27.8	6.50	17.82	16.13
iShares MSCI Netherlands ETF	27.8	6.40	16.17	17.78
iShares MSCI Germany ETF	27.8	5.33	16.17	17.78
iShares MSCI Belgium ETF	27.8	5.00	16.17	17.78
iShares MSCI Austria ETF	27.8	4.99	16.17	17.78
iShares MSCI United Kingdom ETF	27.8	4.85	16.17	17.78
Financial Select Sector SPDR Fund	25.1	4.83	17.82	16.13
iShares MSCI Italy ETF	27.8	4.59	16.17	17.78
iShares MSCI Hong Kong ETF	27.8	4.05	16.17	17.78
iShares MSCI Singapore ETF	27.8	2.32	16.17	17.78
iShares MSCI Japan ETF	27.8	1.46	16.17	17.78
iShares MSCI Malaysia ETF	27.8	0.81	16.17	17.78
<b>Simple Average:</b>	<b>27.0</b>	<b>6.69</b>	<b>16.83</b>	<b>17.08</b>

From inception, the 27-year average annual return of the ETF universe is 6.7%. These indexed funds ranged from Technology to Consumer Products, Health Care and Financials, and from the S&P 500 through International Developed and Emerging markets. Only two reached 10%: the S&P 500 and S&P Midcap 400.

*The two royalty companies returned 17%.*

This is why we study and employ asset-light and hard-asset businesses. For hard-asset businesses like commodity royalties, there is almost no operational expense standing between their revenues and their profits, and generally no capital expenditures required to maintain those profits, no technological

obsolescence risk, and so on. Their profitability characteristics are unique in the universe of publicly listed companies. Also, there aren't many of them.

### Escape Velocity – A Live Demonstration

Finally, to what we really, actually, really do. Like the amortizing 30-year mortgage, it takes a long time for the compounding benefit to express itself in a portfolio, to achieve escape velocity, a term that will be described shortly. Here's what it can look like in an account.

Many moons ago, a new client would originally have heard the words "we're long-term investors, we practice low turnover, and we hold some positions for a very long time." With accompanying explanations, it made a kind of sense at the moment. But then years would pass with not much seeming to happen, like watching the hour hand on a clock. That's why we're still often asked, "What's with the minimal activity and minimal reactivity to these big market changes?" and "Why the focus on asset-light and hard-asset businesses like securities exchanges and royalties?" and "Why won't you own technology stocks?"

The answer, as I was explaining to a visiting client just last month, is that we're waiting for some of the portfolio positions to achieve critical mass, as has happened very visibly lately. But that it takes sufficient time for the power of compounding to eventually dominate a portfolio's returns, and that we're waiting in what we believe to be the best compounding vehicles.

This client, who is unusually astute and fluent in the panoply of investment styles, synthesized my plentiful words in a delightfully succinct way. He was promised that it would be repeated here, though he did not, and is not the sort to ask. He said, "I know what you're doing. *You're waiting to achieve escape velocity.*"

Here is how that process has partially unfolded in accounts of sufficiently long "vintage." Atypically, we do not manage accounts identically. We manage by vintage—an account that was new in 2003 will not hold all the same positions at all the same weights as a new account five years later, even in the same strategy, because prices and valuations will have changed. Because compounding has taken place in an older account that can't have taken place yet in a new account. This description will reflect that style.

- For **Texas Pacific Land Corp. (TPL)**, an older-vintage account opened more than two decades ago would have made its first purchase in 2003 and bought about a 5% position. In the almost 21 years since, the price rose 182x, which annualized is nearly 30%. Its portfolio weight would now be close to 40%. A younger-vintage account opened a decade ago would have made its first purchase of TPL in 2015, also at about a 5% weighting. In the 8 ½ years since, the price is up almost 12x, which is 34% annually. It could easily be roughly one-third of the portfolio.
- Accounts from both vintages were open when we began buying **Grayscale Bitcoin Trust** in early 2017, at about a 0.5% weight. In the seven years since, Bitcoin has appreciated against the dollar by 43x, and that exchange rate differential, annualized, is 70%. In such accounts, the GBTC position weight is now more than 10%.
- The combined weight of TPL and GBTC in such sufficiently aged accounts is close to half the portfolio. That has suppressed the weights of other positions. But that is not to say the others don't have scope

to compound with meaningful portfolio impact, particularly portfolio sectors such as the metals royalty companies and the securities exchanges.

It took eight-plus and 20 plus years for the core TPL position to reach a critical mass and become a dominating element of a portfolio's returns. From this point forward, if TPL were to rise 25%, as might happen in a year of spiking oil prices, the entire portfolio would appreciate close to 10%, even if every other security were flat.

It took over seven years for the marginally small bitcoin position to become a 10-plus percent weight. It has probably not, to date, been terribly influential upon the entirety of the accounts. But from here forward, should the cryptocurrency experiment succeed, as Murray Stahl might say, it will also achieve—as our astute client might say—escape velocity.

If TPL and bitcoin together should appreciate considerably, the *entire* portfolio might well achieve escape velocity, and the thesis will have been demonstrated in situ.

A Live Demonstration of Compounding				
~20yr Old Vintage Account			~10yr Old Vintage Account	
Initial Purchase Weights (%)				
	Date	MV%	Date	MV%
TPL	2003	5.0%	2015	5.0%
GBTC	2017	0.5%	2017	0.5%
Total		5.5%		5.5%
Current Weights (%)				
	Price Change	MV%	Price Change	MV%
TPL	182x	40%	12x	33%
GBTC	43x	10%	43x	10%
Total		50%		43%

*For Illustrative Purposes Only. Companies listed are for illustrative purposes only. They may not be actual portfolio holdings. Texas Pacific Land Corporation ("TPL") is a large holding across the Firm. It is a top holding in several funds and strategies and the Firm collectively controls greater than 16% of the outstanding shares of the company. Please refer to Important Disclosures for further information.*

## Our Technology Bona Fides in the Tech Bubble II Era

As coincidence would have it, our second significant technology stock investment was also purchased in the early phase of a technology bubble: Bitcoin.<sup>8</sup> What is Bitcoin if not technology? Specifically, Information Technology. It is nothing but software code and algorithms. There isn't a factory, a headquarters, or even a rented office. No CEO or CFO; no employees. It's "just" digital money (separate from other applications of its blockchain).

### An excerpt from a prior commentary: Revisiting an Old Friend – The Thesis for a Defensive, De Minimis Investment in Bitcoin (February 2021)

*Strategically, we viewed the bitcoin's initial 0.5% position cost as a one-time insurance premium that paid for the ultimate fiat currency debasement hedge. Bitcoin, in contradistinction, is fixed in supply. If it were accepted as an asset class and, therefore, as a store of value, why should not this store of value be equivalent in capitalization or value to other stores of value? In other words, if supply is fixed, the only rationing mechanism remaining is price.*

<sup>8</sup> [https://horizonkinetics.com/app/uploads/Revisiting-an-Old-Friend-%E2%80%93-The-Thesis-for-a-Defensive-De-Minimis-Investment-in-Bitcoin\\_Feb-2021.pdf](https://horizonkinetics.com/app/uploads/Revisiting-an-Old-Friend-%E2%80%93-The-Thesis-for-a-Defensive-De-Minimis-Investment-in-Bitcoin_Feb-2021.pdf)

Robust debate could be had as to whether Microsoft, which holds the IT sector's apex position, has any more IT cred than Bitcoin. The Microsoft business was originally a single piece of software that enabled a personal computer to operate. The company bore no manufacturing cost for the disks that had to be inserted into a PC to turn it on. First, magnetic "floppy disks," then CDs. The company licensed the production and use of those disks to IBM and other computer makers, and then waited for its bank account to be credited whenever a PC was sold.

Bitcoin doesn't have any license agreements with any manufacturer, because it is pure IT, incorporeal, without physical form or substance. It might be the ultimate Information Technology investment.

As money, Bitcoin's market opportunity is, at the very least—because this is defined too narrowly—the global money supply. Bitcoin's current market value is 1.5% of the combined money supply of the U.S., China, Japan and the Eurozone, so the scale of its expansion potential is at least 66.7x.<sup>9</sup> Plus, money supply has expanded at nearly a 6% annual rate in the past 10 years; what the future holds is open to debate. Despite being in its infancy, Bitcoin is probably the strongest currency the world has known, judging by its exchange rate progress against every single currency on the globe.

Our third and very successful technology stock investments were first made just over a year ago: modest positions in **Grayscale Litecoin Trust** and **Grayscale Bitcoin Cash Trust**. They have so far appreciated on the order of 7x and 10x.

If those investments, from 1996 onward, don't qualify us as being as open to technology as the next guy, then you might like our fifth technology investment of note, which is our second technology fund. We've invested the research, time, and organizational effort to establish our own **Blockchain Development ETF**, which began trading in 2022. How cutting edge is that?

#### Why a Crypto Blockchain Fund

At the moment, blockchain technology is very early in its evolutionary process, but it will eventually impact all business. There are other blockchain ETFs, but this one takes a different philosophical approach: that, with the exception of inventors or someone who's privately funding the research, one doesn't really get to invest in technology. You only get a *business* that produces or uses it. Accordingly, the task is to identify the types of businesses that can best benefit, but with the least of the many known risks. Businesses that will be described shortly.

First, one relatively narrow and pedestrian example of the enormous business scope for blockchain technology, yet which will impact every securities broker, investment firm, custodian, and securities exchange in the U.S.

This company processed \$2.5 quadrillion worth of securities in 2022, with trillions cleared and settled on a daily basis. What company is that ginormous? The Depository Trust and Clearing Corporation, DTCC, which processes and settles the vast majority of securities transactions in the U.S. Late last year, DTCC purchased a company, now named DTCC Digital Assets, to apply its blockchain-based tokenization technology. The potential is to reconfigure the whole trading/clearing/settlement/custody chain—end-to-

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<sup>9</sup> Source: Factset. M2 Money Supply of Major Central Banks (US, China, Euro Zone, Japan)

end instantaneous processing—utilizing blockchain infrastructure for improved compliance, efficiency, liquidity, and interoperability between the communicating entities.

DTCC sees tokenization, which is just the recognition of an asset or security on a blockchain in digital form, as simply the next step in securitization. It foresees building a set of rules into a token that allow for the automation of risk and compliance functions, of repeatable rule sets for securities creation and issuance, and integrating specific securities regulations into smart contracts.

What can these enable? Much of this is about faster, near instantaneous clearing and settlement, reducing errors, reducing redundancies in reconciliation and accounting for transactions, shortening the capital-raising process, allowing more easily accessible secondary markets for traditionally illiquid assets, and more. It's transformative, and it's coming from one of the largest, most trusted financial institutions in the world. Why? On the cost side, even a basis point of efficiency improvements—meaning a reduction of expenses relative to revenues of 0.0001—applied across \$2.5 quadrillion dollars' worth of securities, is a very great deal of money.

The blockchain initiatives of infrastructurally important companies like DTCC, among many others, should lay to rest any doubt that cryptocurrency, in its many applications, is happening. Except through some very narrow channels, like owning cryptocurrency funds, a few crypto mining companies, and some publicly traded cryptocurrency brokers, the great wealth of blockchain investment opportunities barely exists in the public investing consciousness. No doubt because it takes many more words to describe the transformative nature of blockchain than just the two sparkly words that currently have a steel grip on the tech investor's mind—they're *such* a great word pair—artificial intelligence.

Before going further, and lest anyone overestimate by knowledge and competence in this area, I should mention how heavily this discussion leans on the expertise and work of one of our analysts, Brandon Colavita, who manages the Blockchain Development Fund. So much so that I should probably have a pair of crutches engraved with his name, for the next time a blockchain discussion comes up.

#### What Should a Blockchain Development ETF Buy?

In technology investing, what often works best are businesses tangential to - or seemingly unconnected to - the technology itself, yet which are distinct beneficiaries of its adoption and success. Paradoxically, these new-technology beneficiaries can be far more profitable and sustainable than the producers of the technology.

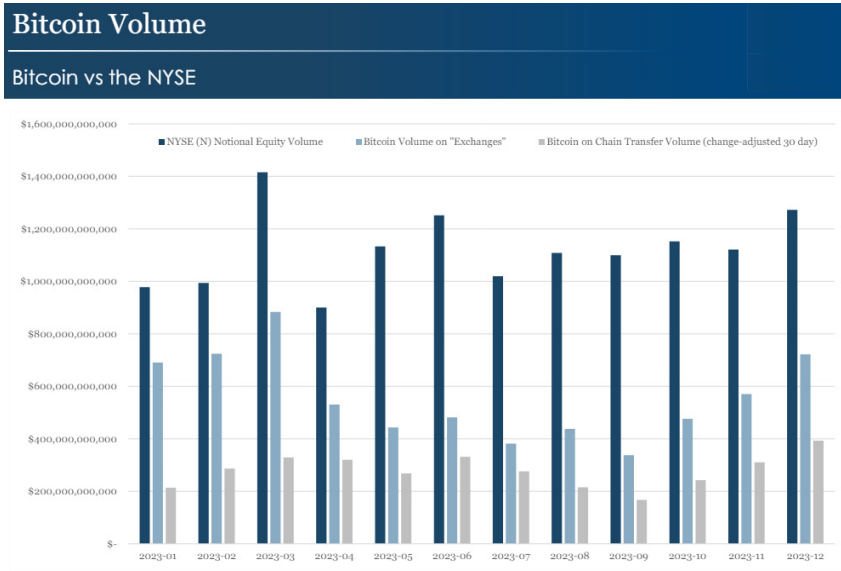
An example from the realm of commodities is the royalty company. Analysts don't really follow them; they follow the commodities themselves and the mining companies. The royalty companies stand to one side, with a hand in funding new projects, and benefit from all of the volume and price increases, with exceedingly little balance sheet or earnings risk. Also, the royalty companies can diversify their project-specific risks in a way that miners can't. They can hold portfolios of scores of royalty agreements across dozens of miners, such that the failure of any one or few need not have a serious impact on profitability. Because mining projects do periodically fail or get put on hold. Over time, the royalty companies massively outperform both the commodity and the commodity producer.

There are analogues in the technology realm. If you want to optimize the two important probabilities in making technology investment choices—reward and risk—then one of the *growth*-centered goals is to be exposed to multiple competing technologies, because one can't know which will be the great successes. A corollary *risk*-centered goal is to somehow avoid a grievous impact from the failure of one of the investments. The idea is exposure to the growth of the sector while avoiding a binary win-or-lose posture.

In the case of cryptocurrency and blockchain, a terribly wide range of companies are developing various applications and the scope of the applications is greater still. Plus, it's all development stage. This involves various forms of tokenization, involving different assets, in different jurisdictions, and with different use cases. How would one even identify the scope of investment possibilities in order to pick and choose winners? The choose-the-winner game in a development-stage industry is a lot like "playing" the lottery or betting on horses.

Another narrow indication of the vast eventual scope of the crypto/blockchain sector is simply the trading volume of Bitcoin itself, which is only one of what some day might be almost innumerable varieties of digital trading assets, including decidedly non-liquid assets like rare art. On-chain<sup>10</sup> transfers of bitcoin alone now exceed that of the most liquid blue-chip companies. As an example, as of yesterday, average transfer value for Apple over the prior seven-day period was about \$6.1

billion. The Bitcoin average adjusted transfer value was \$14.9 billion. Each such example has its flaws, but the reported dollar volume of Bitcoin on so-called crypto exchanges amounts to about half of the New York Stock Exchange stock trading volume, and about a quarter of NYSE volume if you just include on-chain adjusted transfer value.<sup>11</sup>



ETFs, through their ability to equitize non-equity assets, such as commodities and even intangibles like volatility, have been instrumental in popularizing Bitcoin by packaging it in an ETF. The largest, the iShares

<sup>10</sup> On-chain transactions refers to transactions that are recorded directly on the main blockchain. In contrast, off-chain transactions refer to digital asset transactions that take place outside of the main blockchain using intermediaries or other network layers. Off-chain transactions do not affect the state of the blockchain until recorded on-chain.

<sup>11</sup> Adjusted transfer value attempts to capture successful value transfer between different parties, as opposed to the unspent transaction output returned to the original sender.

Bitcoin Trust, has \$18 billion of AUM. Over 40% of the fund is traded every week. This packaging of crypto within an ETF is likely to ultimately reverse, with ETFs and other assets, being tokenized onto a blockchain.

A working premise of the Blockchain Development ETF is that the regulated securities exchanges are the natural gateway to the legitimization of cryptocurrency as an institutional-grade asset class. The DTCC's blockchain initiative doesn't happen without coordination with the securities regulators. The regulators appear to prefer a very limited number of regulated exchanges. Working with established parties that are already tested and engaged with them lessens regulators' burden of oversight with their already strained resources. This practice applies globally, and ensures limited competition for exchanges. It makes the regulated exchanges the natural on-ramp for the increased, and perhaps increasingly complex, number of products and burgeoning volumes.

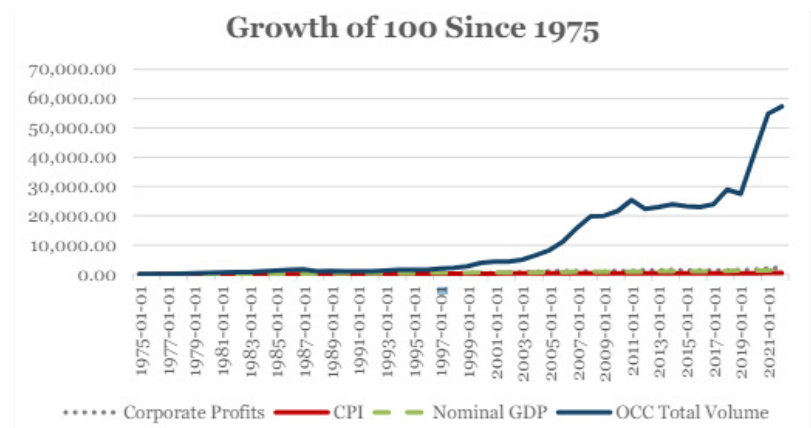
In the past year, just about all of the global regulated exchanges have taken major steps to position themselves as not just beneficiaries of cryptocurrency activity, but as beneficiaries of the movement toward tokenization. Among these steps:

- The CME has become the largest market for bitcoin futures, by open interest, passing Binance, which is the largest cryptocurrency brokerage, or non-regulated exchange.
- CBOE, Nasdaq, and the Intercontinental Exchange all have Bitcoin ETF equivalents trading on their exchanges, and have taken steps to allow options trading on these products.
- This is not just a U.S. phenomenon, Deutsche Boerse announced plans to launch a regulated multi-lateral trading facility for cryptocurrencies and stablecoins in early 2024. It recently purchased a company that will provide a tokenization platform for investment funds.
- The list goes on.

None of this activity is necessary for exchanges' continued historical growth or their rather remarkable level of profitability. It doesn't require massive levels of investment, so the potential benefits are all positive optionality. Yet, as a form of financial infrastructure, they occupy the crossroads between the path of blockchain technology development and the public access to it, to liquidity, capital, and risk control tools. That is what they are emplaced and empowered to capture.

By their nature, they will also capture crypto- and blockchain-related activity in a broadly diversified manner, with very limited negative exposure to any given product failure, just as the royalty company portfolios do.

Neither are exchanges a "bet" on blockchain or crypto. They provide unparalleled participation, not just in the expansion of trading activity generally, but also in monetary



Source: OCC, Bloomberg, St Louis Fed.

inflation. Historically, their expansion is depicted in the total volume of derivatives trading at the Options Clearing Corp. It so far outstrips corporate profit growth and inflation in a long-term chart, those register as a nearly horizontal line.

Exchanges are not the only set of investments in the Fund, but they are by far the largest. There are also specialized asset managers that might have taken a lead in tokenization of investment funds - as an example, making conventional asset funds, like a gold fund, more liquid and fungible. Or managers that have taken an investment bank/diversified portfolio approach to the sector.

There are defense electronics consultancies that have become increasingly important in the Defense Department's and other government agencies' need to be competitive in cybersecurity and in monitoring the Dark Web in order to associate given addresses with certain types of activity. The revenue potential here is significant.

Anyway, we think it's an effective, dare I say elegant, way to participate early in what has the makings of a new set of global-scale asset classes and transaction/financial process technologies. Not too shabby for a firm that "hates" technology.

**IMPORTANT RISK DISCLOSURES:**

*BCDF does not invest directly in cryptocurrencies or initial coin offerings and as a result, its performance does not seek to, and should not be expected to, correspond to the performance of any particular cryptocurrency.*

*The views expressed are those of the portfolio managers as of April 2024, are subject to change and may differ from the views of other portfolio managers or the firm as a whole. These opinions are not intended to be a forecast of future events, a guarantee of results, or investment advice.*

*Please consider carefully a fund's investment objectives, risks, charges and expenses. For this and other important information, obtain a statutory prospectus and summary prospectus by contacting 646-495-7333. Read it carefully before investing.*

*The Horizon Kinetics Blockchain Development ETF (Symbol: BCDF) is an exchange traded fund managed by Horizon Kinetics Asset Management LLC ("HKAM").*

*Associated Risk of Investing in Blockchain Development Companies. The Fund will invest in Blockchain Development Companies. At times, Blockchain Development Companies may be out of favor and underperform other industries or groups of industries or the market as a whole. In such event, the value of the Shares may rise and fall more than the value of shares of a fund that invests in securities of companies in a broader range of industries.*

*Investing involves risk, including the possible loss of principal. Shares of any ETF are bought and sold at market price (not NAV), may trade at a discount or premium to NAV and are not individually redeemed from the Fund. Brokerage commissions will reduce returns. The Fund's investments in securities linked to real assets involve significant risks, including financial, operating, and competitive risks. Investments in securities linked to real assets expose the Fund to potentially adverse macroeconomic conditions, such as a rise in interest rates or a downturn in the economy in which the asset is located.*

*The Fund is non-diversified, meaning it may concentrate its assets in fewer individual holdings than a diversified fund. Therefore, the Fund is more exposed to individual stock volatility than a diversified fund. Fund holdings and sector allocations are subject to change at any time and should not be considered recommendations to buy or sell any security.*

*The Fund does not invest directly in cryptocurrencies or initial coin offerings and as a result, its performance does not seek to, and should not be expected to, correspond to the performance of any particular cryptocurrency. The Fund invests in foreign securities which involve greater volatility and political, economic and currency risks and differences in accounting methods. These risks are greater for investments in emerging markets.*

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*To access the Fund's top holdings, please visit: [Top 10 Holdings](#)*

## Top 10 Holdings (%)

CACI International Inc	6.5
Deutsche Boerse AG	6.2
Cboe Global Markets Inc	6.0
Japan Exchange Group Inc	5.8
Intercontinental Exchange Inc	5.5
TMX Group Ltd	5.0
Urbana Corp	5.0
London Stock Exchange Group PL	4.9
Galaxy Digital Holdings Ltd	4.8
CME Group Inc	4.6
<b>Total</b>	<b>54.4</b>

Holdings are subject to change without notice.

*Book Value: The value of a company's net assets at amounts reported on its balance sheet.*

*Free Cash Flow: is the cash that a company generates after accounting for cash outflows to support operations and maintain its capital assets.*

*P/E Ratio: is the ratio of a company's share (stock) price to the company's earnings per share.*

*Basis Point: One one-hundredth of a percent, used especially in measuring yield differences among bonds.*

*Wilshire 4500 Index: is a capitalization-weighted index of all stocks actively traded in the United States with the exception of the stocks included in the S&P 500 index.*

*The charts in this material are for illustrative purposes only and are not indicative of what will occur in the future. In general, they are intended to show how investors view performance over differing time periods.*

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*This material references cryptocurrencies, including bitcoin. Horizon Kinetics' subsidiaries manage products that seek to provide exposure to bitcoin and other cryptocurrencies. The value of bitcoins is determined by the supply of and demand for bitcoins in the global market for the trading of bitcoins, which consists of transactions on electronic bitcoin exchanges ("Bitcoin Exchanges").*

*Pricing on Bitcoin Exchanges and other venues can be volatile and can adversely affect the value of the bitcoin. Currently, there is relatively small use of bitcoins in the retail and commercial marketplace in comparison to the relatively large use of bitcoins by speculators, thus contributing to price volatility that could adversely affect a portfolio's direct or indirect investments in bitcoin. Bitcoin transactions are irrevocable, and stolen or incorrectly transferred bitcoins may be irretrievable. As a result, any incorrectly executed bitcoin transactions could adversely affect the value of a portfolio's direct or indirect investment in bitcoin. Only investors who can appreciate the risks associated with an investment should invest in cryptocurrencies or products that offer cryptocurrency exposure. As with all investments, investors should consult with their investment, legal and tax professionals before investing, as you may lose money.*

*The S&P 500 Index ("SPX") is a broad-based index widely considered as a proxy for overall market performance. It is the property of Standard & Poor's®.*

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