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2026 Annual Shareholder Letter

"Although it might seem hard to believe, patient inactivity is hard, demanding, and exhausting work." -Murray Stahl

Dear Fellow Shareholders,

The loss of our former Chief Executive Officer, Murray Stahl, is deeply difficult to process; as days and weeks stretch into months and quarters, his passing still feels recent. Murray's exceptional vitality and family history of longevity—exemplified by his active father who lived to the age of 106 (and his favorite uncle, also a centenarian) —had us believing he would continue his work for at least another 25 years. That was certainly his plan, as he shared not long before his death: "I'm busy; I'm doing things; I'm making things happen." Murray had a rare gift for making every project he touched better and more enduring—a legacy that is profoundly true of FRMO.

To those who knew him personally, or through his lectures and writings, Murray was a brilliant mind. Yet, his intellect was only a minor aspect of the man. He was, above all, a devoted husband and father, a loyal and delightful colleague, and a natural-born teacher of unrivaled generosity and decency. The world has lost a true keeper of humanity and we, with his passing, are far poorer for it.

As a firm, though bereft of his wisdom and humanity, at least in physical form, we have every intention of following the philosophy Murray left us, refilling that chalice and keeping it so. Fiscal 2026 was a continuation of our march toward being a conventional operating company, while remaining anchored by the four strategic pillars that have long defined FRMO: cryptocurrency, securities exchanges, hard-asset based inflation beneficiaries (our particular version of it)—and, of course, asset management.

We should never fail to mention the reasoning behind that seemingly odd first choice: Bitcoin and its fixed-supply cryptocurrency offshoots are the first and ultimate monetary-inflation hedge. And a universal one, being national fiat-currency-agnostic. The after-inflation compounding and longevity that it intrinsically embodies are characteristics shared, each in

their way, by the securities-exchange and hard-asset pillars, which should exceed the growth capability and productive lifespans of the ordinary businesses that comprise the equity markets.

Each of those pillars serves the same foundational goal of rewardingly sufficient long-term wealth growth after-taxes and after-inflation, which is the only performance measure that matters. This is how the Horizon Kinetics investment strategies and substantial AUM is generally structured, which is directly relevant to FRMO's revenues.

Asset management, of course, is a business whose longevity is more closely tied to human longevity. And the assurance of the next generation is something we're assiduously attending to, both at Horizon Kinetics and FRMO.

We operate from a position of unprecedented financial strength. We are pleased to report that shareholders' equity has reached a record \$331 million. These milestones are not merely numerical; they record the successful scaling of a capital-allocation model designed quite some time ago to thrive in the volatile macroeconomic backdrop that now confronts us—and will challenge everyone in the coming periods. The commentary that follows is a look into the monetary and physical realities necessitating our current posture.

1. The Macroeconomic Crucible: Debt, Money, and Market Warnings

The global monetary environment has entered a phase of historic deviation from traditional fiscal stability. We are witnessing historical sovereign debt leverage that suggests the underpinnings of the traditional financial regime are being tested to a considerable degree. This is not merely a cyclical fluctuation, but a structural shift. It is not the daily and yearly events, which clamor for constant mind share and tactical planning, that matter in the long term. It is the developing decade and generational events, the signals within the noise, that require persistent attention and strategic pre-positioning.

Comparative Monetary and Fiscal Expansion, and "So What?"

A U.S. Monetary System, Initial Health Checksum: "Some Cause for Concern"	March 2026	March 2020	June 1946 (WW II ended Sept. 1945)
National Debt	\$39.1 trillion (40.1 trill Aug '26)	\$23.2 trill	\$269.8 bill
Debt, % of GDP	122.6%	106.8%	119.1%

A partial rejoinder to the "So What?" of this data is the warning signal emanating from the bond markets, which are beginning to require higher recompense for lending to the U.S. government. As the national debt exceeded \$40 trillion, accusations of yield manipulation have surfaced,

symptoms of a fiscal policy struggling to maintain the illusion of price discovery—the market *can* be an efficient discounting mechanism if and when investors turn their attention in the right direction.

Still, “So What?” \$40 trillion is just a number. But it is not the dollar amount of the sovereign debt burden that has alarmed bond investors. They foresee the possibility of inevitability.

U.S. Monetary System Health Follow-up: “Cause for Concern”	March 2026	March 2020	June 1946 (WW II ended Sept. 1945)
Debt, % of GDP	122.6%	106.8%	119.1%
Add: Deficit, % of GDP	(5.7)%	(4.6)%	(7.0)%
Interest expense, % of Budget Deficit	74%	52%	
Interest Expense, % of Federal Receipts	22.9%	15.9%	10.2%
Int. Exp., as a % of Fed Receipts if existing Treasury debt were to immediately refinance from the average embedded 3% rate to the market interest rate of 5%	38.1%		
	+16% points		
Int. Exp. As a % of Discretionary Spending (everything other than Social Security, Medicare, Medicaid & related)	65%	33%	

Debt as a proportion of GDP—which represents the U.S. as borrower’s economic capacity to pay—now exceeds its post-World War II high. Under dire circumstances, in what became a command economy, the U.S. spent whatever was necessary. One-third of men over the age of 14, including the elderly and infirm, were subject to military service; factory owners produced whatever they were instructed to; and the “guns vs. butter” debate about spending tradeoffs was proven: soldiers were issued free guns, while American civilians were issued butter ration stamps.

- What bond investors observe is an annual budget deficit nearing 6%. That figure exceeds the normalized growth rate of the economy. Real annual GDP growth in the past 10 years has been 2.4%. In the past 20 years, the figure is 1.9%. Still a somewhat sterile figure—“So What?”
- They observe that interest expense in the last handful of years has risen from one-third of discretionary government spending to two-thirds, and that it *now exceeds* defense spending. It exceeds each of Medicare and Medicaid.

- They observe that with each year's \$1.9 trillion deficit, the required additional borrowing adds 8% to the next year's interest burden.
- Perhaps they contemplate that if all the Treasuries were to reprice today—just for illustration—from a current average embedded cost of 3% to the current *market rate* of 5%, that alone would increase the budget deficit—all else held equal—*by 40%*.
- Perhaps they are beginning to game the possibility of the U.S. monetary system tipping into a debt leverage/interest expense/borrowing cycle that the economy is incapable of outgrowing. In which case systemic monetary debasement is an inevitability. It is not so unusual, really; it just hasn't happened *here*. Terminal debasement has ultimately occurred in every nation in every era since records were kept.

When yields are manipulated, the bond market ceases to function as an efficient mechanism for valuing risk across all financial assets. Today's record debt levels greatly reduce the central bank's monetary policy options. This is the central difference between prior inflationary periods and the current one. How does statistical reference to historical U.S. economic and market data help if this eventuality is not in that data? If inflation cannot be controlled by interest rate increases, perhaps it cannot be controlled.

The usual policy solution is to tolerate or even encourage inflation, using time as a tool. Over time, monetary inflation diminishes the relative value of the debt liabilities (more dollar bills in the economy per unit of bonds). Real GDP growth might remain 2%, but nominal growth that includes price level inflation can easily be made to be 6%—or 8% or...something higher. That is the mechanism at the government's disposal. The alternative is to control inflation by reducing the money supply. That idea was last tried during the Great Depression. It became anathema to the point of taboo.

The central bank might already be trapped into a long-term strategy of inflationary money printing. But that isn't known with certitude. What if AI really does engender an unrivaled productivity boom that raises GDP growth above any expectations? Economies are complex systems, like weather systems, with outcomes that defy prediction models.

That is the purpose of contingency investing; once others recognize the outcome, the markets can be terribly efficient, valuations will have adjusted, and protective or exit strategies will have been foreclosed.

The only rational defense is the ownership of hard assets and value-centric disciplines that are tethered to physical reality—or scarcity value—rather than fiat promises.

2. The Exit from the Financial Wilderness: Redefining Value in the Tech Era

For the better part of 18 years, value investing has existed in a "financial wilderness," a period characterized by the relentless outperformance of mega-cap growth companies. This coincided

and blended with the rise of indexation as the preferred mode of investing. This was long enough to “debunk” value and active investing both, and to decimate the ranks of security analysts. Of those who remain, most found salvation in their conversion to ETF and asset allocation analysis.

This era was inaugurated in June 2007 with the launch of the iPhone—an innovation whose impact on civilization is at least as profound as Gutenberg’s invention of the printing press. Just as the printing press required the gradual spread of literacy over centuries, the iPhone catalyzed a digital expansion that reached nearly 6 billion subscribers, but in less than two decades.

From Asset-Light to Capital-Intensive

Between 2007 and 2023, the technology giants operated what appeared to be a uniquely “asset-light” business model. They generated enormous free cash flow with remarkably little investment capital and hardly anything in the way of old-school property, plant and equipment. It was a mirage, a trick of circumstance. The enabling required infrastructure for their business models—whether Amazon’s original online retail merchandising business or its now dominant source of earnings, cloud computing—is the mobile internet.

The internet functioned upon an existing landline telecommunications infrastructure. Those extremely capital-intensive networks required enormous investments to support the rapid growth of the Information Technology giants, which might more properly be called the Internet Giants. By regulation, that physical network is maintained and paid for by the phone carriers. In the 16 years to 2023, U.S. broadband providers expended \$1.3 trillion in their networks, and their profitability suffered greatly for it. The Verizons of the world essentially funded the extraordinary profits of the IT market leaders.

However, that “free ride” has ended. The growth plans of these IT companies, which they consider to be an existential necessity, have shifted toward artificial intelligence and cloud computing. Those businesses are profoundly capital-intensive. The spending on hyperscale AI data centers in the U.S.—by one estimate, a six-year total through 2030 of \$1.8 trillion—rivals the two greatest mobilizations of capital on record in this nation.

The greatest reference point must surely be the country’s spending for World War II. In fiscal scope, between 1941 and 1945, the country spent \$296 billion in then-current dollars on the war effort. This amounted to 31% of 1940 GDP. That’s \$5.1 trillion of inflation-adjusted spending today. Which means that the aforementioned data center capital expenditure projection is of the same order of magnitude as the cost of World War II.

The most relevant reference would be to the most massive private capital mobilization in U.S. history. It, too, was for an economically transformative new technology. This was the late-19th-Century construction of the nation’s railroad system. In the 12 years to its 1887 peak, a roughly

estimated \$3.8 billion was invested in building 77,565 miles of track—enough to circle the earth three times, and more than doubling what had been built in the 45 prior years.

As a frame of reference, U.S. government revenues were in the \$300 million range, net public debt was around \$1.2 billion, and currency in circulation (valued in gold) was in the \$800 million range. The amount of private capital mobilized into the railroads was simply staggering. At their peak, railroad companies were over 60% of the U.S. stock market.

In today's dollars, that \$3.8 billion would be worth somewhere (depending on the inflation index methodology consulted) in the neighborhood of \$175 billion. This year, the top five data center hyperscalers plan to spend about \$800 billion.

This is not a homily about stock market booms and busts. Far from it. It is about how we're positioned to profit from a private capital mobilization and deployment wave of unprecedented proportions.

The "So What?" for the investor is clear: The indexes remain dominated by mega-capitalization issues that are transitioning from cash-flow gushers into capital-heavy enterprises burdened by infrastructure costs, legal liabilities, and debt leverage. The technology might be new, but the business lifecycle pattern is timeworn. TPL itself rose from the ashes of but one of a long list of defunct railroads of that era. The scale of the IT company borrowing to date has already become an identified element of, as noted above, the warning signal emanating from the bond markets.

This is where the demarcation line of our "release from the wilderness" is being drawn. As these giants that dominate the equity indexes become increasingly "normal" businesses, and as the expected reward for holding them becomes less alluring, the relative appeal of traditional value disciplines—concentrated on tangible assets and non-symmetric information—is being restored. This transition leads us directly to the physical bottleneck and investment opportunity-in-waiting of the modern age: energy.

3. The Energy Bottleneck: AI Demand and Real Asset Solutions

While the digital economy appears ethereal at a superficial glance, its growth is anchored in the physical reality of uninterrupted power requirements. The shift toward AI is not a minor adjustment in power draw but a massive escalation in energy physics.

The Physics of Data Manipulation

To understand the energy demand of AI, one must look at the Field Effect Transistors (FETs) within a semiconductor GPU. The basic unit of time in these devices is the clock cycle—the gathering, decoding, and executing of data. In every single clock cycle, billions of gate capacitors must be charged and discharged to maintain binary logic gates. To manipulate more data, more gates are required, demanding a constant, uninterrupted flow of electricity. The electric power

demand for datacenter requirements is graphically described as a steeply rising curve. That power consumption is for both computation and for cooling.

- **Energy Consumption Disparity:** As AI applications are rapidly adopted across seemingly every segment of society and the economy, and as they become more capable through agents or agentic search, so does the energy consumption.

Google reports that a single query on its Gemini Apps platform consumes 0.24Wh of power. Agentic search doesn't have a single average power usage figure, because the AI agent's task can be either simple or complex, depending on what it's asked to do. Unlike a standard search query, an agent doesn't answer once—it plans, calls a model, waits, reads results, calls the model again, often employing subagents. The energy needs scale with the number of model calls, tokens and idle GPU time. Tokens are the numerical form into which text or images inputs are broken down for processing and eventual reconstruction into the output—back into words or pictures. Tokens average approximately 75% of an English word, depending on the word's complexity—for example, "share" may be one token, while "shareholder" may be split into multiple tokens. The number of tokens employed is also used to determine the price of the query.

A simple short text chat could consume energy similar to a regular Google search—around 0.3Wh, but a long, reasoning response could require between 3 to 40Wh, so over 100x at the high-end. A "heavy agent" session could consume 1,300Wh. Heavy agentic use could mean multi-step coding, data analysis or research for which the agent needs to make dozens of model calls and generate thousands of tokens. So the more complex, the more energy.

It is not the high-value mathematical computation itself that consumes much power, it's the multiple sub-queries and moving of data between memory and processor. Over time, more efficient systems are developed. As well, over time, there is more usage and more complex usage, as we witness daily in our homes and offices.

- **Physical Realities:** A 5 GW AI datacenter campus requires New York City-scale electric power. Larger ones are being planned. At that size, they can't "hook up to the grid." Texas just established comprehensive restrictions that would limit the vast majority of such applications.

The hyperscalers will make their own electricity with their own power plants. For a variety of practical reasons, the fuel of choice is natural gas. It is not difficult to envision the magnitude of that demand as well as the duration, to judge by the 99-year land leases that are being signed.

This is not merely a U.S.-demand phenomenon: Liquefied natural gas exports from the U.S. between 2018 and 2025 rose 4.6-fold. In the first six months of 2026, LNG exports were 23% higher. Global demand is translating into U.S. demand. The price inflation potential is significant; it's what happens when demand finally edges above the ready supply of a critical commodity. The timing might be uncertain; the ultimate outcome is not so uncertain.

The physics and physical realities don't stop there. Thermal power plants, whether nuclear- or natural-gas-powered, require abundant supplies of water for cooling. So abundant that they can't be located proximate to most population centers and agricultural aquifers.

The logistical limitations highly circumscribe where ongoing large-scale datacenter development can take place: somewhere with a co-location of sufficient natural gas, water, remoteness, and multi-thousand-acre plots of land. And highway access and high-bandwidth fiber optic lines.

Strategic Land and Operational Leverage

This emerging reality has led us to the Permian Basin as the "next evolution" for data center locations, where Texas Pacific Land Corporation (TPL) and LandBridge Company LLC (LB) control 1.22 million acres of strategically located land in which, on a look-through basis, we and any other shareholder partake. Where there are abundant land-based strategic resources, natural gas and non-potable water among them.

The rejoinder to the "So What?" regarding LandBridge and TPL is the nature of their leverage. Unlike the tech giants currently "burning" cash to build infrastructure and building *debt* leverage, land requires no further capital or even incremental operating expense to meet new demand. These companies have *profitability* leverage, which manifests in 85%-plus operating profit margins. Meaning that incremental revenue is almost tantamount to incremental pre-tax profit. This is "capital-light" inflation hedging.

It is also technology investing in the truest effective economic sense: investing in the *demand* for a transformative new technology—with extraordinary free cash flow margins yet free of winner/loser selection risk and the attendant valuation risk.

We contrast this with capital-heavy crypto miners like Riot Platforms, which possesses 2 gigawatts of power but reports a six-month operating income loss of \$374 million on revenues of \$341 million, in part due to the crushing weight of its depreciation (a close stand-in for its capital expenditures).

As of their most recently reported results the so-called "Magnificent Seven" IT giants have just about run out of free cash flow. Restated, they are no longer profitable on a cash earnings basis.

4. Cryptocurrency Strategy: Engineering Coin-per-Share Accretion

The Flaws of Institutional Vehicles

The strategic objective of FRMO's cryptocurrency engagement is the engineering of growth through operational cash flow, rather than passively holding a depleting asset, which is what happens when owning cryptocurrency through an ETF, crypto treasury company, or typical mining company. We view these institutional vehicles as structurally deficient:

- **Bitcoin ETFs:** These vehicles "bleed" coins per share. Because bitcoin produces no income, the ETF must sell coins to pay management fees.
- **Treasury Companies:** These firms have a corporate infrastructure and operating expense budget to be funded. They often dilute existing shareholders by selling shares at a premium to their NAV to buy coins—a virtuous circle that is unsustainable once the premium evaporates.

As to mining, we are to our knowledge—inclusive of Horizon Kinetics Holding Corp. and Winland Holdings Corp.—the only publicly traded crypto miner to have generated cumulative operating profits and not suffered grievous losses. Four of the largest publicly-traded miners, with an aggregate stock market value of \$21 billion,¹ lost money in each of the past eight quarters through March. After eliminating mark-to-market gains and losses for the bitcoin on their balance sheets, the average operating loss margin meaningfully exceeded (50)%.

The central idea of crypto mining is to produce money for less than the money is worth—the millennia-old practice of seigniorage. In this case, the money earned is bitcoin. So long as people wish to hold and transact it, mining can't ultimately be a loss-making activity, otherwise mining would have to stop, no different than for a gold miner or wheat farmer. Moreover, there must be a profit margin sufficient to compensate for the time and capital investment risk. Yet mining is not profitable all the time.

In the "simple" case, profitability varies from period to period due to the various impacts of how many miners are competing for the bitcoin reward (the network hashing power), the cost of electricity, the system's equilibrating difficulty factor, the cost and efficiency of old- and new-generation mining equipment and, of course, the impact of the every-four-year halving of the bitcoin reward.

The key to solving these shifting interrelated factors is to have a rational capital allocation strategy: to buy new (or used) mining equipment gradually and only when one can expect to both recover the capital cost of the equipment and thereafter earn a reasonable return on that capital. Which means one shouldn't programmatically deploy capital to buy equipment. One might have to hold cash in abeyance until an appropriate entry point.

¹ MARA Holdings, Riot Platforms, CleanSpark Inc, and Core Scientific

The publicly-traded miners take a different approach, which is to raise capital and then promptly deploy it. They don't view their mandate as holding "non-productive" cash or making market-timing decisions. If that deployment occurs shortly before a more efficient model is released, then the newly purchased fleet will generate sub-par returns and the equipment itself will lose substantial value.

The not-so-simple case has been that the publicly-traded crypto miners did not have to cease operating, despite their persistent and remarkable losses. That is because, until recently, they were able to continually raise new capital by selling shares at 5x to 10x book value. In essence, they turned new equity capital into billions of dollars of operating expense and equipment write-downs.

Eventually, capital providers would be expected to cease underwriting that approach. In fact, that appears to be happening, since the valuation multiples of this group of miners has contracted to about 2.8x to 4.6x book value. If this valuation contraction continues, they will no longer be able to accretively raise external capital. Indeed, they have begun to pivot their operations away from mining, repurposing their electric power arrangements toward...the AI/data center market!

The Protocol Arbitrage Advantage

Ultimately, the more market value and vested economic interests that accrue to bitcoin, the greater the value of maintaining the blockchain, which is done by the miners. The eventual business opportunity will be large. The bitcoin experiment is still in the emergent phase. What will be the market value scale of bitcoin if it is eventually accepted globally as simply another parallel currency, alongside the dollar, the euro? The opportunity to support that will redound to those miners with the patience to persist.

In the meantime, the mining marketplace is far more diverse than bitcoin alone.

FRMO utilizes a gradualist and multi-strategy mining approach. We're currently mining coins in addition to bitcoin. Litecoin mining, for example, allows us to utilize differentiated equipment with a longer expected life and higher returns on invested capital. We sell mined Litecoin for cash to fund Bitcoin mining expenses, enabling "true coin-per-share accretion".

The various bitcoin-based fixed-issuance cryptocurrencies—those with the non-inflationary scarcity factor that is our strategic interest—should all eventually have a similar value. Most people are still inclined to think that the winning cryptocurrency will be the one with the best technology. For instance, Litecoin confirms transactions about four times faster than Bitcoin, making it more suitable for point-of-sale transactions; while Zcash is designed to provide encryption for financial privacy while also allowing for regulatory compliance.

But that belief ignores the fact that the technology is open-source code. Every Bitcoin-based blockchain will have access to the same technology, although it is not necessarily true that each one uses the same technology.

If one accepts this line of reasoning—that the best technical improvements to any one “bitcoin” currency will be available to any of the other “bitcoin” currencies—one should have exposure to all of them.

One might ask why these various versions have different valuations and upon what those differences are based. The valuations appear to be based almost entirely upon the computational power of their respective blockchain networks. The Bitcoin network, measured in total hash rate, dwarfs the others. This is expressed in their respective market capitalizations: Bitcoin is \$1.52 *trillion*, while Litecoin, Bitcoin Cash and Zcash are \$4 billion, \$4 billion and \$19 billion. The inherent optionality among these is also of the orders-of-magnitude scale.

5. Infrastructure and Asset Management: Milestones in Exchanges and ETFs

Our strategy involves owning the “venues” of trade. If there’s business to be done in an economy, there needs to be a venue to trade, to hedge, to raise capital. The securities exchanges are the longest-lived continuously operating businesses in the world and continue to thrive. They benefit from volatility and from inflation; the trading data is valuable information that is an intrinsic part of their earnings. Trading in non-conventional assets carries significantly higher profit margins than liquid index baskets.

MIAX has a 17.1% share of the U.S. options market. That’s a moving target. In 2025, trading volume in its options operating segment rose 42%; the industry’s volume rose 26% and it had a year-end market share of 15.9%. At the time of our first investment, its options market share was about 1%. In addition, volume at MIAX Futures (formerly Minneapolis Grain Exchange) reached another record in 2025.

All of this led to a rapid increase in revenues last year. In 2025, MIAX produced \$431 million in net revenues—56% higher than the prior year, and revenue this year is expected to rise another 26%. This growth is beginning to create the operating leverage consistent with the exchange industry. On an adjusted basis, MIAX reported cash operating earnings more than twice the 2024 number.

While the MIAX operating margin and cash flow profile have dramatically improved over the last few years, there is ample room for greater profitability. The current cash operating margin could rise by another 33% to reach rough parity for an established exchange.

There is much else on the new and creative product development front that is afoot at MIAX, and in the exchange business any single new contract or index that finds resonance in the

market can be large indeed. Exchanges share the unusual property of almost unbounded scalability in such instances, with negligible incremental expense.

The Canadian Securities Exchange (“CSE”) is the country’s largest competitor to the Toronto Stock Exchange (“TMX”). It has carved out a niche as a regulated listing and trading venue for small-cap companies, which are primarily domiciled in Canada. Taking on an established monopoly exchange is no small feat; however, the CSE now lists approximately half of all small, emerging growth public companies in Canada—TMX maintains the other half. The market opportunity for CSE: TMX was not much focused on the emerging and smaller companies, but on the larger, more liquid ones.

2025 was a strong year for the CSE. Trading volume of its listed securities, now 733 companies, rose by 27.8%, and the trading value of its listed companies increased by 50.8%. The listing business adds incremental revenue aside from any trading volume, in the form of annual listing and market data fees. The high margin and scalable properties of listing-related revenue explains the fiercely competitive behavior between exchanges to both maintain—and also obtain—new listed companies.

The CSE recently completed its most significant acquisition to date, which was the purchase of the National Stock Exchange of Australia. The initial strategy is to build out an exchange—mostly in the form of technology and trading volume capacity—with the capability to compete with the incumbent Australian Stock Exchange. While it took several years in Canada, the CSE has a track record of success in this effort.

Another area of strategic importance is the ability of these two exchanges (under one operating parent) to cross-list companies. In principle, this should be possible, because both Canada and Australia heavily rely on the natural resource sector. The investor bases of these public companies are similar, such that a Canadian mining company listed on CSE could reasonably access additional capital through an equity offering in Australia, and vice versa.

In August, the CSE achieved another milestone: the listing of an ETF. After receiving the necessary regulatory approval to become a “Tier 1” exchange, which provides it with nearly all the listing and trading abilities of TMX, ETF listings are a natural extension of the CSE’s strategy. It takes patience and time (and a fair amount of capital) to build a national stock exchange. The CSE is attempting to build two and become a multi-geographical exchange operator. Based on its historic level of success, its long-term prospects are bright.

Why do CSE Markets and MIAX rhyme with bitcoin, cryptocurrency mining, TPL, FRMO and SandboxAQ? Our version of early-stage investing.

One of the most important value creation elements of CSE is shared with MIAX, which makes intuitive sense—they’re both securities exchanges. But it also shares this factor with bitcoin. How is bitcoin fundamentally consonant with MIAX? Moreover, all of these investments share a

very central commonality with TPL and SandboxAQ the privately held quantitative computing AI company. And perhaps most interestingly, with FRMO Corp. How?

One of the easiest ways to get a return that might be measured as an order of magnitude or greater—in other words, at least 10x or greater—is to buy something that has yet to achieve any market share, that is a tiny fraction of its ultimate potential size. *That* was the big multiplier for the Microsoft personal computer operating system or the Apple iPhone.

- CSE is in its formative stages. Our first purchase was six years ago. It is a small position for us, and the value is now three times higher, but it has a long way to go to begin achieving the scale economies that MIAX is beginning to realize.
- In 2016, we made an initial investment of \$250,000 in Miami International Holdings. A few years later, we exchanged our investment in the Bermuda Stock Exchange for additional MIAX shares, for a combined cost of a little over \$3 million. As of our current financial statement, MIAX is a \$15 million holding. It has a long way to go.
- Bitcoin, being a programmed money, can be measured precisely as to its market size and market share: by the number of wallets or miners or hashing power, or its market value compared to the global money supply. By comparison to today, bitcoin's market value and market share 10 years ago were almost non-existent. If the Bitcoin experiment will continue, it has a long way to go, meaning order-of-magnitude scale of expansion.

The team here at Horizon Kinetics recently developed a cryptocurrency pricing methodology that was highlighted in the most recent Horizon Kinetics Quarterly Commentary. It probably would not have been possible if Winland and Horizon Kinetics did not have the hands-on expertise that is earned by directly operating a cryptocurrency mining business.

This enabled us to think about and develop a model that incorporates observations from both the supply side (cost of production) and the demand side (utility, e.g., wallets, addresses, etc.). Before that, what existed were various inferences but not a complete model. It is indeed a comprehensive piece of work.

The model's usefulness in suggesting not only the price of bitcoin at various points in time but making explicit the structural relationship to time itself is kind of jaw-dropping. The supply-side, or cost-of-production model, suggests a price within about two years of about \$130,000. The demand-side of the equation—think “network effect”—suggests a two-year future price of about \$270,000. It's important to note that both economic factors pertain, in the real world, to bitcoin pricing at different times, and the great pricing variability at this early phase of its existence might be said to range between the two.

Six years from now, we're talking order-of-magnitude again.

- Cryptocurrency mining as an operating business, as an industry, will have a very long way to go if bitcoin continues on its path toward broader acceptance.
- In 2016, at the cusp of the active application of fracking technology, the Delaware Basin was producing a tiny fraction of the oil and gas it almost surely would one day be producing. In 2015, TPL's proportionate share of oil production in its royalty interest acreage was 384,000 barrels; in 2017, it was more than twice that, and in 2025 it was 4.9 million barrels. Water sales shifted from \$8 million in 2016 to \$25 million in 2017, and last year it was \$294 million. They have a long way to go, too.
- SandboxAQ is a private company in which, through our HK fund investments, FRMO invested a modest amount of capital in April 2025. In another private equity raise this May, the April valuation was revised upward by 140%. To date, the company has raised nearly \$1 billion. Its investor list is a who's-who of readily recognized high-tech venture capital. And then, of course, there is us. Suffice to say, SandboxAQ has not lacked in any meaningful way the ability to access large pools of capital.

What does this company do, exactly? SandboxAQ was conceived within Alphabet, Inc. by Jack Hidary, a Columbia University-educated physicist, in 2016. His stated mission was "to solve previously unsolvable problems by harnessing the exponential power of AI combined with quantum—a phenomenon we call AQ." In 2022, SandboxAQ separated from Alphabet, with Mr. Hidary as CEO and Eric Schmidt, Alphabet's former CEO, as Chairman.

SandboxAQ utilizes AI very differently than one probably thinks. AI has become such a ubiquitous term, that an important distinction must be made. Most AI providers use large language models (LLMs), like ChatGPT. LLMs source data that is available on the internet—words, images, videos, etc. There is nothing proprietary about this data because anyone with a computer or phone has access to it. Nor is that data necessarily valid. Think about what may be found on the internet.

SandboxAQ, in contrast, uses something known as large math or large quantitative models (LQMs). These use the principles of chemistry and physics. They are trained on databases of numerical fact sets like molecular model libraries, and focus on physical applications rather than subjective language queries. The company operates at the quantum level of molecular structure—where the electrons hang out.

These are millions or billions of scientific data points (and trillions upon trillions of required iterative computations) that are aggregated and analyzed, and which might take years to develop. These become proprietary data sets. Whereas LLMs primarily reduce costs through time savings, a LQM drives value by employing higher-dimensional calculations to accelerate innovation. This translates into breakthrough applications across a wide range of industries. Among them: new drug discovery, materials discovery

(for example, next-generation energy cells beyond lithium-ion chemistry), financial services, aviation, energy, military defense, and medical diagnostics. At least some explanation is required to show how economically powerful LQMs are.

New drug discovery illustrates nicely. It takes roughly 5-10 years just to get a compound into the clinical phase. Once it reaches that regulatory evaluation phase, which is designed to assess efficacy and toxicity, approval time is up to 14 years. Around 90% of those candidates fail. Since fewer than 10% of new drugs reach commercialization, much of the expense of failed candidates must be recovered through the high pricing of the relatively few successfully patented drugs. There is much at stake here. The 2025 research and development expenditures of just the largest three largest U.S. and largest three non-U.S. pharmaceutical companies was \$65 billion, and drug development expense has long been rising on the order of 13% annually.

The early evidence is that high-performance computing applied to drug discovery is about an 18-month process. It also appears to substantially “de-risk” new drugs before they get to the extremely high-failure-rate, high-expense clinical trial stage, resulting in much higher FDA approval rates.

High-performance computing promises to dramatically reduce the dollar cost of both the discovery and testing phase, and accelerate the time-to-market benefit of new therapies. In success mode, SandboxAQ could save the pharmaceutical industry many billions of dollars annually in R&D expense. Would that not translate, at a minimum, into hundreds of millions of dollars in future revenue? This is merely one industry application. The company has contracts in materials science engineering (lighter-yet-stronger composites for, say wind turbine blades); in the global refinery industry (catalysts to improve production efficiency) with clients like Saudi Aramco; and much more.

Lately, SandboxAQ has expanded from single-customer engagements toward monetizing its expanding product portfolio at scale. LLMs can only make use of existing data and content, but can’t generate new content, which is precisely what quantitative computing does and which it can sell to researchers using LLMs. Key SandboxAQ AI Models are now available for purchase directly via Claude and Anthropic, in AWS Marketplace (Amazon Web Services) and Google without having to build custom integrations. Any researcher in the world can now tap one of the company’s content libraries and associated analytical tools simply by asking questions in plain English.

This is a major market-expansion opportunity. High performance computing can cost tens of millions of dollars in compute expense, which puts this sort of massive simulation-based research out of reach for most of the companies that would benefit from it. SandboxAQ can lower the cost barrier enough to enable commercial research

activity for prospective users who might not otherwise be able to afford to engage in certain lines of research. This is reminiscent of the productivity wave that followed the introduction of rentable cloud computing time by Amazon Web Services in 2006 for small or start-up businesses that didn't have the scale to afford to own that much computing power.

SandboxAQ has even begun to take economic interests in the future commercialization of products it helps create for customers. These are significant strategic evolutions in the character of SandboxAQ's business model and ultimate value. One can readily see that SandboxAQ could one day operate at order-of-magnitude greater scale.

- FRMO Corp., in 2001, started with \$10,000 of cash and \$3,600 of research subscription revenue from a renowned small and micro-cap research analyst and hedge fund manager, often referred to as the King of the Pink Sheets, sometimes referred to as Lawrence J. Goldstein. That revenue cost us nothing tangible, and was intended to cover our accounting and audit costs as a public company. Turns out we weren't conservative enough.

Our costs and expenses were \$4,151, so we recorded a net loss of \$551, just like a real start-up. That's what the \$10,000 of reserves were for. Just as one might expect from an idealized conception of a royalty-based business, the 2001 income statement had a total of four line items: revenue, operating expenses, taxes—which were zero that year—and net income.

Thereafter, we layered on additional royalty contracts. By 2004, revenues were \$160,000, and by 2009 they were \$11 million. We were and always intended to be an operating company. The key: FRMO paid for revenue streams interests in early-stage investment products, like a mutual fund or hedge fund strategy.

An interest in a fund that has barely enough assets under management to be profitable doesn't cost much. The risk is that the fund might not become successful, and we might have had a 100% loss. But the asymmetric return possibilities are extreme. Investment funds are highly scalable: a \$1 million of AUM could as easily draw \$100 million, or \$1 billion of assets. The revenue contract that produced the greatest profit for us cost us 315 shares of FRMO Corp, a matter of hundreds of dollars, and this contract provided us with millions of dollars of income.

Along the way we exchanged our various contract revenue streams for a single-revenue interest in Horizon Kinetics. The equity interest in Horizon Kinetics also derived from conversion of a prior advisory relationship. All the cash, all the investments you see in the financial statements flowed from that operating revenue. It's quite something, really.

That's what all these investments have in common. We would like to continue increasing our operating activities. If we haven't done more, it's not for lack of investigation. Mining was, and

remains, a next major idea. From the earlier description of the practical or applied business of cryptocurrency mining, one should be able to imagine the eventual positive scale possibilities, while also understanding that the capital allocation process can't be rushed, if the economics don't permit. Do that, and disaster awaits.

That continued business intention includes **Winland Holdings**, in which we've gradually increased our ownership interest over time. It is one of our cryptocurrency mining vehicles and has particular expertise in this area. You should understand the intellectual capital we have at our disposal, even though those are not necessarily line items on the balance sheet.

By the same token, to borrow from the crypto and AI lexicon, we're searching high and low for businesses that are, first and foremost, good businesses, within our circle of competence, and of course at an attractive enough price to make it economic. Unfortunately if you behave that way, especially if you're using own capital, not just OPM (other people's money), if you're truly selective, it's tough to find. People have all sorts of ideas about what we should buy, and we're always interested. Just be aware, there's a hurdle.

The Scarcity of Capital in Real Assets

A critical component of our "Manifesto" is the observation that extractive industries are currently unable to raise equity capital. Investors are funneling fantastic sums into AI, leaving energy and metals mining starved of external capital investment.

There are currently no energy IPOs scheduled, and there is only one gold miner (Newmont) in the S&P 500, with a statistically irrelevant 15-basis-point weight. This scarcity of capital ensures that commodity supply will remain constrained even as demand—driven by AI (an accelerant to ordinary-course global population and per-capita GDP-based growth) and monetary debasement—accelerates.

Finally, our gradual short position in path-dependent ETFs remains a significant cash source. As of May 31, 2026, this position stood at \$10.9 million at cost, with a market value of \$0.7 million on the balance sheet.

6. Financial Robustness and the Path Forward

In an era defined by fiscal uncertainty and manipulated yields, a pristine balance sheet is the ultimate strategic asset. FRMO has maintained a disciplined capital allocation that places us in a position of exceptional strength. Exclusive of the noncontrolling interest in our consolidated investment in Horizon Kinetics Hard Assets, FRMO boasts an enviable financial position:

- Cash Reserves: Over \$34 million.
- Minimal Debt: Current liabilities of less than \$2 million.
- Asset Growth: Total assets exceeding \$431 million.

- Net shareholders' equity: \$331 million.

The "So What?" rejoinder is that FRMO has matured into a conventional operating company with the liquidity and balance sheet capacity to fund multiple new projects simultaneously without seeking outside capital. We have emerged from the wilderness, prepared to capitalize, in our particular ways, on the massively-scaled capital-intensive realities unfolding in both the immediate and longer-term future. Those are the global demand for AI compute and, if the bitcoin experiment continues to continue, in the global demand for non-debaseable money and transactional efficiency.

AI compute demand satisfaction rests upon physical resources: land, natural gas and water, among others. Astoundingly, AI datacenter spending dwarfs that of the 1800s railroad boom. Perhaps the economic figures across one and a half centuries are not like-to-like comparable. Yet the scale of AI spending is also a mere stone's throw from U.S. World War II spending. In any case, there's a pleasing symmetry in deploying the hard-asset remains of a failed 1880s railroad in order to profitably capture the resource demand for a 21st century information technology boom.

There are increasingly visible signs of independently pending physical resource and monetary inflation risks, something that, should it jointly manifest, hasn't occurred in the professional experience of today's investors. It is a rare opportunity to be able to profit from both, much less try to simply avoid being harmed. Our pathway there is through the study and practice of contingency investing and scarcity investing.

Contingency investing requires investments that are not binary choices, that can prosper even in the absence of the contingency. Scarcity investing takes the other side of decades increasing financialization of the markets, the assumption that hard assets are passe simply because there are financial instruments that are presumed to mimic or take their place, such as futures, "perpetual" futures and options, or that equitizing volatility and commodities into the form of ETFs is equivalent to owning an interest in the asset itself.

In the financial markets, demand for a given product can be satisfied by an immediate increase in the supply of that product. In the coming period, it might come as a surprise to some that the ready supply of all sorts of critical physical commodities is pretty much fixed.

We believe we are better positioned today to benefit from future opportunities—and to have a hand in developing those opportunities—and to forward our long-term investment plans than we have been before. We are fortunate to have engaged and long-term shareholders and wish to thank you all for your support over the years.

Peter Doyle
Co-Chief Executive Officer

Steven Bregman
Co-Chief Executive Officer