August 18, 2016

Dear Fellow Shareholders,

Readers of our Shareholder Letter for 2015 will recall that in the first paragraph we made reference to exceedingly low interest rates. We did not imagine the appearance of negative interest rates. As far as we can determine, after consulting Sidney Homer's classic text *The History of Interest Rates*, we are now in the lowest interest rate environment in the last 5,000 years.

This is important, since interest rates establish value for all financial assets. Consequently, valuations for many types of financial assets are high. The investment opportunity set is, therefore, unusually narrow. It is for this reason that we carry about $49 million of cash and cash equivalents on our balance sheet. Indeed, viewed on a tangible assets basis, we are largely uninvested, since much of the balance sheet valuation of our Horizon Kinetics LLC assets is necessarily intangible.

Last year, we concluded with a strategic commentary. This year, we will begin with the strategic commentary since our worldview animates many of our actions. Although we maintain such a liquid, uninvested balance sheet at the moment, we actually have more corporate investments than we had last year. The commentary will, therefore, follow a somewhat different format.

## *A. Strategic Consideration*

In order to give the reader a sense of the corporate liquidity currently available, we should go beyond mere balance sheet statistics. FRMO has $100 million of buying power in our investment accounts, if we were fully margined and sold no investments. We have about $10 million of liquid investments in our corporate accounts that could, in principle, be sold.

The Polestar Fund, a fund managed by Horizon Kinetics, is only 46% invested in long security positions. None of this counts securities sold short. Thus, the investment posture is very conservative. This fund has $70 million of buying power in a fully margined position. CDK, a small fund also managed by Horizon Kinetics, has several million dollars of buying power over and above its more than $2 million of cash. We could continue in this manner and calculate a total buying power figure; however, the intent is merely to give the reader a sense that the corporation, both directly and through its various investments, has at its disposal very considerable financial resources to a degree never possessed in the history of the enterprise.

Our view of cash is very different from the consensus view. The consensus view is that since cash, at best, yields nothing, it is important to fully invest so that assets earn at least some return. Our view is that zero interest rates and the global movement toward industrial scale investing, not only in its indexation incarnation, is distorting asset pricing positively and, in some instances, negatively. In the latter instance, opportunities, however few, are being created. We will make reference to some of these in other sections of this letter.

It is, of course, needless to say that we have no ability to forecast the future of interest rates. Essentially, there are two possibilities. The first is that rates will increase towards a more historically normal level. This would dramatically reduce the valuations for most financial assets. Perhaps more importantly, given the amount of debt outstanding, the interest charges could be a heavy burden on the economy. For instance, according to SIFMA (Securities Industry and Financial Markets Association), publicly traded debt alone in the U.S. now exceeds $40 trillion. If private debt such as bank loans were included, the number would be far larger. Yet, even $40 trillion of publicly traded debt implies increased debt service of $1.2 trillion if rates rise by 300 basis points. We can well understand the reluctance of any central banker to raise interest rates.

Hence, one must reckon with the possibility that rates remain low for a very considerable period of time. The theoreticians inform us that most investors will have no other recourse than to make even greater use of risk-based assets. This may well be true; however, a minority may well be attracted to those securities and investments that have been excluded from the movement towards industrial scale investing. As contrarians, our strategy is oriented towards this subset of the investing universe. In the balance of this letter, we will describe our activities in this context.

## *B. <u>Horizon Kinetics LLC and the Revenue Share</u>*

This year, we group together FRMO's 4.95% ownership interest and its 4.199% revenue share in Horizon Kinetics LLC, as each are different manifestations of an interest in an investment management company. It is worth noting, since it is almost always forgotten, that an investment manager is a fiduciary. This entails that a manager must place the interests of clients first.

In that light, it may surprise readers to learn that we have been actively discouraging investment in some of our strategies. For example, we currently discourage potential clients from investing in our high yield strategy. Although it may seem bizarre, it is important that shareholders understand our thinking.

To illustrate, say that we purchased 100 different high yield bonds, equally weighted, for a given client. We might, without extraordinary risk, achieve a yield of perhaps 6%. This figure is not far removed from the yield to maturity of commonly utilized high yield bond indexes. Let us further suppose that we were the world's greatest high yield bond analysts, though we assure the reader that this is not the case. Let us suppose that, while we do occasionally choose a bad investment, that results in loss only 20% of the time and that the average loss in this contingency is 20%. Therefore, the result would be as follows:

> 80% success rate earning 6.00% = 4.80% in a portfolio context
> 20% failure rate with a 20% average loss = (4.00)%
> Net result = 4.80% + (4.00)% = 0.80%

This calculation makes no allowance for transactional friction nor any allowance for management fees. It should be self-evident that the risk/reward ratio of such an investment is not favorable. Incidentally, high yield losses, when these occur, frequently exceed 20%. That is why one is customarily paid a high yield; however, the available yield is not high at the moment.

It is for this reason that most of our investment strategies at Horizon Kinetics have high cash balances. No one knows the future. We certainly cannot predict the future; however, low interest rates turn the risk/reward ratio against the investor in virtually every asset class. We merely use high yield as an example, because the attributes of this asset class are readily quantifiable.

Readers should also be aware that at the end of calendar 2015, Horizon Kinetics sold its index options business to Neuberger Berman. This had been our fastest growing division and had about $450 million in assets under management. It is an example of the rapidly growing field of liquid alternatives.

The strategy involved selling put options on a weekly basis on indexes like the S&P 500. The two primary determinants of option premiums are volatility and interest rates. A standard measure of volatility, the CBOE Volatility Index (“VIX Index”), stands at 11.55 as of this writing. On June 20, 2014, the VIX Index was 10.85. However, it is rarely this low. It might be recalled that on October 24, 2008, the VIX Index was 79.13. Naturally, we came to the conclusion that the risk/reward was not favorable, although we recognize that we could be wrong. Our thinking was simply that the compensation to be earned from essentially selling insurance on indexes was too small for our taste.

Horizon Kinetics retained the Kinetics Multi-Disciplinary Income Fund, which has the ability to write index put options. However, at the present time, the fund is very conservatively positioned and writes almost no options. One day, we imagine we will be very active in writing/selling options in this fund.

During the past fiscal year, there have been some opportunities to raise new money in specialized investments. For instance, earlier in calendar 2016, we raised money on a performance fee basis to invest in bonds of certain companies that had the distinct possibility of declaring bankruptcy. In fact, in short order, several of these companies actually declared pre-packaged bankruptcies. Our purchases were made during a period of credit market spread expansion. We obtained good entry points and we actually earned a performance fee. We earned the fee in the second calendar quarter of 2016 and, since the FRMO fiscal year ends in May, the performance fee is not yet reflected in the revenue share with Horizon Kinetics.

In 2016, Horizon Kinetics also established a fund that invests in bitcoin. Bitcoin is an example of a cryptocurrency. This asset class will be discussed more fully in the section pertaining to our investment in Digital Currency Group. This asset class did not exist several years ago; it is entirely new. The fund established an investment maximum of $50,000 per client. We are not aware of any other firm that so constrains client contributions. However, we believe it is the easiest and most obvious way to control risk. We simply limit the amount of money that can possibly be lost to an amount that is tolerable. Investment firms often complain about the short-term focus of clients. The short-term focus is more understandable if the investment in failure mode could quite negatively impact their lives. In any case, we rapidly sold essentially every available slot in the fund.

It is the nature of the investment field that the opportunity set will increase and decrease with no regular or predictable pattern. As a consequence, we believe that we need to manage the assets entrusted to us in such a way that the asset level should reflect the nature of the opportunity set. As can be seen in this necessarily brief section, we have, and we will, exit certain strategies, constrain client inflow, and actually discourage new money when we feel that the opportunity set cannot support new investment due to lack of potential return.

Of course, assets under management is considered the proper metric for the evaluation of an investment company. It is not likely that we will always increase this metric if we actively discourage investment in some of our strategies. We believe that a reputation for candor, even at our own expense, is a much better measure of success. One can always lose assets under management for a variety of reasons. We believe that reputation is a far superior asset. Unfortunately, it is not readily quantifiable.

### *C. Investment Funds*

The funds merit their own section in this letter, since the opportunity set is changing in a most fascinating way. In our research, we frequently make reference to an ETF or indexation divide. As a consequence of the industrial scale upon which indexes operate, the largest companies frequently have valuations far in excess of smaller companies. For example, large-capitalization shares have outperformed micro-capitalization equities for years. The S&P 500 trades at nearly two times the price-to-book-value ratio of a typical micro-capitalization index. This is very unusual. However, the enormous industrial scale of indexation investing, as well as the market capitalization float-adjusted methodology of weighting, requires maximum trading liquidity that simply cannot be provided by genuinely small companies.

Another factor, the importance of which is difficult to quantify, is that the large companies frequently pay robust dividends. This is not usually true of small firms. There are many large capitalization equity indexes that are marketed as so-called “bond substitutes.” This is nothing other than a consequence of the worldwide central bank effort to lower interest rates, to zero in many instances. The theory behind this effort was to essentially force investors into risk-based assets and, hence, stimulate economic growth.

An unintended consequence of this worldwide policy is that, quite understandably, national stock indexes have become quite correlated with one another. More importantly, the bond asset class is correlated with the equity asset class. And the valuations of both are now sensitive to interest rates to a degree that is perhaps historically unique. In its conception, indexation is a most effective means of achieving instantaneous diversification. Of course, as the indexes become increasingly correlated, the diversification effect is negated. This is a very serious problem in risk control.

As a consequence, the industry has developed the concept of so-called “liquid alternatives.” These can be managed futures, options strategies, or statistical arbitrage, in which one group of investments with desirable characteristics are held long and another group with less desirable characteristics is sold short. The idea, quite obviously, is to earn profit from the spread between the two groups, much like a hedge fund. This involves the use of margin.

In this sense, it is not a new idea. However, in order to place the idea into operation, it must function with only marginable securities. It might seem odd, but there exist numerous equities that are not marginable in practice although, in theory, they should be marginable. In fact, the investment funds of FRMO actually hold NYSE listed shares with market capitalizations greater than $1 billion, for which little, if any, margin is obtainable. Not surprisingly, a very significant valuation divide is developing between the marginable and non-marginable varieties of equity.

Indeed, the valuation disparities are not always caused by margin-related issues. For example, the Polestar Fund owns shares in a successful company that trades at 40% of book value with a very liquid balance sheet of considerable size. Recently, as an experiment, one of us tried to buy $600 worth for a personal account held at a major brokerage firm. This transaction could not be processed since it was asserted that the company did not disclose audited financials. Naturally, we objected that audited financials did exist and were available on the company website. The financial results are audited by one of the biggest, internationally recognized accounting firms. Unfortunately, we did not reckon with the definition of "available" in the modern cloud-based universe. Available means available on a certain database. Thus, to "protect us from ourselves" and to control risk, the purchase was prohibited. Our various investment funds are perfect vehicles to collect such assets. Of course, it is our responsibility to find clients that possess the proper time horizon to undertake these types of investments.

Ironically, the process of creating alternatives in the industrial scale investing world actually creates hedging opportunities for non-marginable instruments. Many of these equities have simple business models. They may have cyclical dimensions, but these attributes can, in principle, be hedged; however, hedging can be expensive.

Yet, the alternatives industry, in its quest for liquidity, is constantly creating products that make use of the futures market. The laws require daily uniformity of structure so that the product in question is obligated to trade the futures market daily. Since most futures are generally in contango, this creates a negative roll yield. This type of structure is known as path dependent. In layman's terms, this means that in the fullness of time, the structure must decline in value. Such instruments are excellent hedging instrumentalities for long positions (which themselves may trade at low valuations, because the equities have been quantitatively excluded from the investment universe).

Thus, while the opportunity set is contracting in many segments of the investment universe, the opportunity set is expanding in other less well understood segments. Incidentally, one might justifiably assert that FRMO stock itself is one of those excluded securities. It may interest readers of this letter to learn that Horizon Kinetics, as of the date of this writing, owns roughly 85,000 shares of FRMO. Horizon Kinetics has almost $50 million of cash and marketable securities on its books that is not consolidated on the FRMO books. Of course, some of this is held in the investment funds. Ultimately, in the investment world, it is frequently the case that when one return vector is blocked, another opens.

*D. <u>Exchanges</u>*

The balance sheet carrying value of FRMO's investment in exchanges is $8,371,000. The bulk of this is held in the Minneapolis Grain Exchange ("MGEX") and the Bermuda Stock Exchange ("BSX"). The basic idea is that the smaller exchanges collectively represent the alternative to industrial scale investing as practiced by the larger exchanges.

For example, MGEX specializes in Hard Red Spring Wheat. The price of wheat has declined by about 20% in the past 12 months. Yet, as one can readily see from the data on the MGEX website, year to date through July, volume has only declined by 1%. It will be recalled that this is a bear market for commodities and, one day, the bear market will cease.

Also, MGEX owns the three-building complex at 400 South 4th Street in Minneapolis. Total square footage is 325,000 square feet. The original building was constructed in 1903. Currently, the city is undergoing extensive redevelopment adjacent to the MGEX buildings that should, one would imagine, enhance the value of the property.

The Bermuda Stock exchange, or BSX, is the leader in insurance-linked securities ("ILS"), with more than 100 listings. This could prove to be a very interesting asset class if interest rates remain low for a very long time. The basic insurance industry model is to accept risk and hold premiums, largely in the form of fixed income assets, with the idea that the interest earned on the float will, in the long run, exceed the inevitable claims and losses, and earn substantial profits in the process.

Of course, in a zero interest rate world, this business model is entirely unworkable. Investment in risk-based assets is not a realistic option for almost any insurance company, since market value fluctuations could conceivably impact the ability to pay claims. Therefore, the only obvious alternative is to sell risk to the investment market and pay interest. In this case, the business model would be that premiums collected minus interest paid will provide a robust rate of return, as the losses are assumed by the investors in insurance-linked securities (bonds). This is an asset class that merits close scrutiny. In any case, the BSX is the leader in this field.

OneChicago is an exchange specializing in single stock futures. Futures represent, in principle, the alternative to leverage. Thus, as interest rates decline, the need for this instrumentality with regard to stocks is reduced. In this sense, one might be tempted to assert that OneChicago is the mirror image of the BSX with regard to insurance-linked securities. It should not be surprising that OneChicago volume was down 27% relative to one year ago and open interest declined by 30%.

Yet, single stock futures is also an alternative to traditional securities lending. As the alternatives market expands, there are real issues of counter party risk that regulators will be forced to consider. A clearinghouse system is much more transparent and, therefore, far easier to regulate than individual counterparties. All OneChicago transactions are cleared through the Options Clearing Corporation (OCC), which is rated AA+. To contextualize that rating, many of the big banks that serve as prime brokers are rated BBB+. A really outstanding bank, in a balance sheet sense, might be rated A-. Over the past year, Standard & Poor's has been downgrading the ratings of many systemically important banks. Centralized clearing of large securities lending operations converted to futures would probably enhance the creditworthiness of many banks. It is not likely to happen at the present time, since securities lending is so profitable. Nevertheless, another financial crisis might quickly change this view. Ergo, OneChicago could become an important FRMO asset.

Another recent investment is the Canadian Securities Exchange, or CSE, operated by CNSX Markets. CSE, a relatively new exchange, is the first stock exchange to be approved by the Ontario Securities Commission in 70 years. CSE is addressing a problem mentioned in various places in this letter: the rise of industrial scale investing, which has dramatically affected the ability of small companies to reach investors and attract new capital. This is a particularly acute problem in Canada.

The Canadian economy is natural resource-based and this entails that these businesses are generally working on highly capital-intensive projects for which capital is frequently required. Unfortunately, there is very little space for small companies in the realm of industrial scale investing. The need for an exchange that lists small companies was apparent. Exchanges are marketplaces that bring together capital and enterprises. The capital raised is invested in projects that create jobs. This capital function is crucial to economic development.

The year to date activity on the CSE has been very impressive. Trading volume has increased 64% versus last year, to 2.01 billion shares just in the first six months of 2016. The number of listed securities is up 12.3% versus last year, to 328 different issues. The companies raised CAD 123 million in new capital, which is an increase of 28.4% versus 2015. Perhaps most importantly, trading on the CSE in shares listed on other exchanges increased to 1.82 billion shares, which is up 19.1% versus 2015.

Another recent investment is the MIAX Options Exchange ("MIAX Options"). This is a different type of exchange investment in the sense that an enormous effort has been made by the exchange to develop world class trading technology. This technology is important since options are a much more precise method of risk transference than statistical arbitrage. MIAX Options currently has a 7.49% share of the options market. Year to date volume of 145 million contracts represents a 3% increase versus 2015. The company is unique inasmuch as its systems were designed entirely in-house. Many potential economy of scale activities are possible with such technology.

In this section, it is also worth mentioning that, on a very small scale, we have been able to raise outside capital to co-invest with us in the exchange area. Thus far, this has been done via the South LaSalle Partners, LP fund. In conception, the effort in the exchange area is not only a proprietary investment activity, but also a potential asset management activity.

## *E. Digital Currency Group*

This investment is our first venture into the realm of cryptocurrencies. Modern computer technology makes possible the creation of non-fiat currencies. Throughout history, there have been many currencies not issued by governments. Gold and silver are effectively non-fiat currencies. Tobacco leaves were used as currency in Colonial America. Even sea shells have been used as currency.

In the modern world, governments have had a monopoly on currency issuance. As a generalization, governments have frequently abused this privilege and have undertaken actions that severely diminish the value of currencies. The interest in gold as an investment is derived in part from the memory of government engineered currency depreciation. It has happened in recent memory in Argentina and Brazil. It happens in a much more organized way in the case of the Indian rupee. We believe that it will continue to happen. If this supposition is true, then cryptocurrencies should emerge as a very important asset class.

Among the Digital Currency Group's ("DCG") assets, it owns Grayscale, which operates the Bitcoin Investment Trust (symbol: GBTC). DCG operates Genesis, which is a cryptocurrency trading firm. It also operates CoinDesk, which is a cryptocurrency news and research company. DCG also takes minority positions in a variety of cryptocurrency-related companies. One of these is Bitpay, which is a bitcoin payment service provider. Another is Elliptic, which identifies illegal activity on the bitcoin blockchain. Another investment is in Coinbase which, among other offerings, provides insured electronic wallet services.

We regard FRMO's position in DCG as a venture capital investment. It certainly involves risk, which explains our hitherto small commitment. Nevertheless, we are paying very close attention to developments in the cryptocurrency realm. If it is genuinely the intention of governments to engineer a zero rate of compensation on short-term fixed income and then engineer some degree of inflation, essentially guaranteeing a negative real return, the investors of the world will eventually seek a stable value solution.

Considerations of space and reader fatigue make it impossible to fully explain the benefits of non-fiat fixed-supply currencies. We expect to publish research on this subject in the future. At this juncture, perhaps it is sufficient to paraphrase Oscar Wilde by stating that if this is the way that governments treat their investors, they don't deserve to have any.

## *F. <u>Short Sale</u>*

This has been our most effective use of capital. We generally sell short path dependent ETFs and sometimes sell short conventional indexes as a hedge. Last year, it was possible to keep a running tally of gains on the balance sheet; however, in January 2016, a variety of call options sold on path dependent ETFs expired worthless (as expected), and it was necessary to recognize those gains. We anticipate that the same will happen in January 2017.

We now have a balance sheet that permits us to use this type of investment much more frequently and much more extensively if circumstances should warrant. In any case, the profits from this activity have essentially provided the funds for various investment undertakings. One must be disciplined about when to make use of these types of investments. The availability of the investment is simply an outgrowth of formulaic industrial scale investing.

*G. Horizon Kinetics Hard Assets LLC*

As of fiscal year end, FRMO held a 5.08% position in this undertaking. The investment itself is consolidated on the FRMO financial statements. Specific information can be found in Note 4 to the financial statements. The Horizon Kinetics Hard Assets LLC ("HK Hard Assets") investments generally pertain to companies involved in the production of commodities. We claim no expertise as to the future prices of commodities, but observe that commodities are currently a generally depressed asset class. Our investments will generally be largely debt free companies that own properties containing commodities. The strategic importance of this investment has much to do with the problems encountered by hedge funds during the past 10-15 years.

Historically, a hedge fund could be non-correlated with equities because of interest rates. In order to understand this point, consider a theoretical hedge fund structure in the age of 10% interest rates. Let us assume that a given fund sold short $1,000,000 worth of equities and held long $1,000,000 of equities. The short sale proceeds could be invested in short term T-Bills and earn 10%, which would generate 75% of this sum as a rebate, known as the short sale rebate, to the fund.

Even if the manager was a poor investor, the fund could, in theory, perform quite well. Say, for example, that the stock market declined by 10%, the hedge fund longs declined by 11%, and the short sale equities declined by 9%. The manager would lose 2% (the differential between the long and short returns) on all equities and earn 7.5% from the rebate, for a total return of 5.5% in an environment of declining equity prices. Such was the origin of the allure of the hedge fund.

Of course, at 0% interest rates, this is not possible and many short sales come with securities lending fees. Thus, one cannot successfully manage a hedge fund in the historical manner.

In our specific case, we mentioned path dependent commodity based ETFs that possess negative roll yield characteristics. These might well create profits over time; however, commodity prices might rise suddenly for any number of reasons and this price increase could easily overwhelm our negative roll yield in the short term. In this case, the long position in HK Hard Assets can serve as a hedge to the short position. This is very unorthodox, since a short sale is generally considered to be a hedge to a long position. In our case, the long position can be a hedge to the short position.

Beyond these seemingly arcane hedges, the investment thrust of HK Hard Assets is very interesting because, in this and other fields, there are companies that effectively have been removed from the investment opportunity set. This removal has even occurred in certain NYSE listed shares.

*H. Winland Electronics*

Winland has been a modest but profitable investment. As will be recalled, this small electronics company sells electronic environmental monitoring devices. It even has an exposure, in a manner of speaking, to cloud computing through a product known as Insight, which is a remote environmental monitoring system that tracks failures and provides alerts for the management of critical condition environments. Although one should not expect it to displace the large cloud computing companies, it is possible to earn a robust return on invested capital by finding small niche services that are uninteresting to the large firms.

Winland still has excess capital relative to its requirements. Nevertheless, the management is patient and eventually opportunities to invest will become available as is the case in every other field of investment.

It should also be recalled that Winland has a small investment in a specific exhibit created by Exhibits Development Group. The exhibit is called *The Magical History Tour*. It is a Beatles memorabilia retrospective currently on display at the Henry Ford Museum in Dearborn, Michigan through September 18, 2016.

*I. Concluding Remarks*

As is by now self-evident, we are moving all of our businesses in a very different direction than the common practice of industrial scale investing. Unfortunately, when one views the returns from stock indexes in the past 10 years, it is not generally acknowledged that one is, in great measure, looking at the effects of interest rates. We have no particular insight into their future course; however, it should be self-evident that due to the low level of interest rates, the past 10 years are not likely to be repeated. If rates remain low, the entire bond asset class cannot possibly provide a reasonable rate of return. Therefore, the investment world must seek alternatives. Our 2016 annual report is the story, thus far, of that search. And we have the balance sheet resources to act when action is required.

We cordially and humbly thank our shareholders for their support over the years.

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| Murray Stahl | Steven Bregman |
| Chairman and CEO | President and CFO |