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Mast Investment Letter
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Back to the Wealth Management Investment Universe
For two generations of investors, just short of one hundred years, investment research and security transaction became funded entirely by product sales and distribution, not investment analysis. The **products add value** at the determinant, emotional point of sale: 1) investor demand for **investments which have recently demonstrated superior price appreciation** (momentum) and 2) **accelerated/increased return using leverage and illiquidity**. Products appeal to investor bias toward already appreciated assets. Leverage and illiquidity imply special insight and capability not available to investors without product enhancement. As the marketing stories related to the products comprise the content of marketing advertising and financial news, **investors herd themselves**, momentum confirmed with biased information loop, into popularly priced investment assets. We are intelligent, but we are also human. It is difficult to identify when the volume of peer behavior and information confirmation distorts asset prices and concentration.

Each economic and market cycle entails two, human-behavioral cycles. The first half is recovery from the economic and investment losses from the previous cycle. Alternatives include incurred losses and patient recovery. That accomplished, investors **seek investments, and investment advisors, which are new and different from the failed investments**. The wealth management firms prepare new products and services. They switch clients who pick up the new products, the same at all the financial product sales firms, but new for the clients **switching from one firm to the next**. This cycle, beginning March 2009, has a unique component. At **about the halfway point of this cycle to date, 2013, hedge funds were attractive marketing and fee products for the wealth managers to distribute**. Following the momentum and leverage maxim, they herded into energy and commodity investments. Those quickly failed in the **70% commodity market decline** into 2014 and 2015. **Non-traded REITs** were part of the same, early-failure product array. Also at that time, income-panicked baby boomers loaded up on **annuities with 2% internal rates of return**. Those are now zombie investments as better income alternatives emerge from the public markets, and the annuity reserves, particularly "special" investments, remain illiquid and unmarked to market. Unlike hedge funds and non-traded REITs which have already declined, investors will not be aware of annuity impairments for several years, and then without recourse due to the contracts. So, some **investors switched wealth managers, and products, not just once, but twice in this cycle**. This peripatetic financial service switching demonstrates the product story marketing focus of investors and the product distributors who serve them. It is not financial planning, investment management or investment process. It is new product appeal and promotion. It works again and again. It fails again and again.

The **Harvard Endowment** realized commodity-related investment losses in 2017. "A driver of Harvard's underperformance stemmed from losses in its natural-resources portfolio, which includes timberland and vineyards and was long a meaningful contributor to the endowment's returns, valued at roughly $4 billion a year ago. The markdown follows a 10% write-down in natural resources in the prior fiscal year and represents a significant change of view by the new leadership on the investments. **That portfolio will take multiple years to overhaul**." (WSJ 9/20/17)

Some hedge funds that do not want to realize losses while fulfilling client redemption demand resort to an accounting sleight of hand from the financial crisis. "Pine River Capital Management has asked investors if its flagship hedge fund can resort to a controversial tactic popular during the financial crisis: the 'side pocket'. Clients said the request from the $8.5 billion firm was a **response to a move by investors to pull more money than Pine River expected** from the fund which has significantly lagged behind the S&P 500 the past two years. Pine River in recent weeks asked fund investors if it could segregate roughly $90 million in illiquid assets to **sell them off over time instead of immediately**, clients said. Side pockets became a flashpoint during the financial crisis, when some managers inundated with withdrawal requests relied on provisions in their fund documents to segregate their assets over their client objections. **Investor frustration with hedge funds has deepened**. The practice could tick-up again if liquidity in markets disappears or funds continue to get hit with larger-than-expected redemption requests." (WSJ 9/18/17) An alternative to depleting or closing unpopular funds is the introduction of a new fund. "Brevan Howard Asset Management LLP, one of the world's biggest hedge-fund firms, plans to inject $300 million to $400 million into a **new fund run by one of its star traders to revive its fortunes**. Brevan's assets under management have tumbled from about $40 billion to $11.6 billion in recent years amid weal returns from its flagship fund." (WSJ 9/20/17) Starting the new fund fits with the **wealth management strategy of switching from unpopular existing funds into popular new funds**.

Private equity investments are a newly popular investment product. As **public market financial assets reach higher prices** and lower expected returns, investors demand better returns and the **wealth management product distributors fill that need** appropriately. The private equity managers note this high demand and take the opportunity to cash out of their own firms, **selling them to the public (through the wealth manager distributors**). "Money pouring into private equity hit a new record this year. The rise in stake sales comes as **private-equity firms are paying higher prices than ever for companies and raising record-breaking funds**. Record demand for private equity is prompting industry executives to take unusual action – selling all or part of their firms. Some of the world's largest publicly traded fund managers are snapping them up. Private equity firms are using money from the stake sales to **hire more staff, create new kinds of funds** and settle the often thorny question of how to buy out retiring founders. Such sales are sometimes interpreted as signals the **private-equity market is peaking**. Why would such savvy deal makers sell at any time other than the top, the thinking goes. Private-equity assets have more than doubled in the last decade to $1.75 trillion at the end of 2016." (WSJ 9/12/17)

Debt Funded Investment/ Consumption Expansion

Hedge fund, private equity and momentum asset investment is generally fueled by repressed-yield and historically cheap borrowing cost. "**Lending to the most highly indebted companies has climbed by more than half this year,** raising fears among some investors that a key corner of the financial markets is overheating. The heavy debt loads accompanying the private-equity buyouts of companies. The **risks of excessive lending were in sharp relief last week**, when Toys "R" Us Inc. filed for bankruptcy protection, hampered by its significant leverage amounting to $5.3 billion of debt, much of it in the form of leveraged loans and high-yield, or junk bonds. The **volume of leveraged loans, a relatively risky form of corporate borrowing, is up 53% this year in the U.S.**, putting it on pace to surpass the 2007 record of $534 billion. The leveraged-loan market has long been favored by private-equity firms raising cash to fund company takeovers. Now, **investors are jumping in because central-bank stimulus has pushed down bond market returns**. In the U.S. alone, investors have poured $16.9 billion into loan funds this year. In the U.S., nearly a third of loans to private-equity-backed companies this year are leveraged six times or more. Five of the six largest new loans backing leveraged buy-outs this year have exceeded those levels. Corners of the **market are showing signs of overheating**. High-yield bonds are trading at their highest levels since before the financial crisis." (WSJ 9/25/17)

Lending against lending, much debt already on the books is further encumbered. "Globally, there are $58 trillion in FX swaps and related exposures which **equals about three-quarters of global gross domestic product**. Accounting conventions leave it mostly off-balance sheet, as a derivative, even though it is in effect a secured loan with principal to be repaid in full at maturity. Nonfinancial companies and other institutions outside of the U.S., excluding banks, may be sitting on as much as $14 trillion in **missing debt held off their balance sheets**." (WSJ 9/18/17)

Auto, student and credit-card loans are all above the $1 trillion club. Increasingly impaired student and auto loans are now joined by credit card balance risk. "**Credit-card lenders are seeing delinquencies** creep up again after a brief respite in the spring. **Investors need to be on guard for more negative surprises**. Capital One Financial, Synchrony Financial and Alliance Data Systems have all seen delinquencies rise as a percentage of total loans over the past several months. All three focus on lending to less creditworthy borrowers with Synchrony and Alliance Data specializing in store-branded, private-label cards. Delinquency rates are some of the highest the industry has seen in years. The poor loan performance is perplexing because it coincides with a strong labor market. Credit problems are creeping up because consumer debt has been rising faster than incomes." (WSJ 9/21/17)

Debt Funded Financial Asset Expansion

About semi-annually, Standard and Poors releases its SPIVA report on the performance of actively managed funds compared to their passive index benchmarks. We will provide further analysis of a recent report next week. The investment superiority of index funds eliminates most investor need for financial product sales firms, currently know as wealth managers. To keep relevant and to retain the perception of added value, wealth managers create new products which appeal to investor attraction to momentum assets further accelerating returns (or losses) with leverage and illiquidity.

It is investor market demand for popular financial assets and wealth management marketing of asset and leverage engineering which herds substantial investor dollars into the same, popular assets. The **problem always arises, and always in wealth management accounts, when the popular assets decline in price**, first slowly and then quickly, as the leverage unwinds, even in the most safely-perceived assets. "One common sign of trouble ahead is people borrowing heavily to buy equities. **Investors should be worried then that stocks are being supported by record amounts of margin debt**, according to research released last week from the Bank for International Settlements. These kinds of loans secured against stocks have often proved dangerous because when the share prices fall, borrowers are forced to sell. In the U.S., margin debt is more than three times the level ahead of the 2008 crisis and is greater even than its peak in 2000 before the dotcom crash, according to the bank. **U.S. loans continued to grow, including at Morgan Stanley, Bank of America Merrill Lynch and UBS's American wealth arm**. **Rich clients desire to borrow against stocks has been stoked by low interest** rates **and rising stock markets. It is attractive for banks, too. Lending against shares is seen as less risky** than mortgages. Also, **if the borrowed money is invested with the bank, that lifts assets under management**. Equities have to fall 20% to 30% before margin loans are underwater. That protects the banks but **doesn't stop a wave of selling** to repay debt when a downturn comes. That could spell real pain for everyone else." (WSJ 9/25/17)

A Princeton economist, Marcus Brunnermeier, "surmised bubbles tend to emerge around technological innovation – whether that be the advent of canals and railroads in the 1880s, the internet in the 1990s or credit instruments like collateralized debt obligations in the 2000s. **Uncertainty around the impact of these innovations can lead to speculation** and aberrant pricing. **Bubbles can be toxic and destructive when investment in new areas is fueled by debt**. We find that the severity of the economic crisis following the bursting of the bubble is less linked to the type of asset than to the financing of the bubble. **Crises are most severe when accompanied by a lending boom and high leverage of market players, and when financial institutions themselves are participating in the buying frenzy**. Borrowers find themselves sitting on assets with falling values and are forced to sell or default, creating a spiral of further asset-value declines. Credit, a lifeblood of investment and spending, dries up, feeding the spiral." (WSJ 9/25/17) Since 1980, the baby boom demographic experienced wealth and asset growth, including recent inheritance. They participated in various asset price **distortions in 1987, 1990, 2000 and 2008**. Retiring boomers demand income and it is no coincidence that fixed-income financial assets continue at 35 year record high prices and low yields. It is also no coincidence that they are leveraging into wealth management products, distorting asset prices with leveraged concentration.

Wealth Management Stream of Consciousness
Investor participation in economic, business, government and market stories is boundless. It is ever-changing, new, unstable and impermanent. This is the same condition of investor attention, feeling and reaction. With the marketing assistance of wealth managers and their funded news and entertainment channels, investors get into the fringes of the usual investment order. Some managers, notably Ray Dalio of $160 billion hedge fund Bridgewater Associates, tracks wealth management product herds for investment opportunity. "The core of investing is quite simple: **Determine what everyone else thinks, and then figure out in which direction they are wrong**. That's it. No one tells you what they think. You've got to feel it. That's why Wall Streeters say things like, "We are lowering our above consensus expectations earnings estimates." It's all about figuring out what is priced into a stock right now. That's the **pulse of the market, the collective mind meld aggregated into stock prices**. I know from experience this is the hardest pat of running a hedge fund. You can find the greatest story ever, but if everyone already knows it, there's no money to be made. And the **pulse changes with each** government statistic, each daily ringing of cash registers and satellite images take of parking lots. That's why stocks trade every day. Real-world inputs and the drifting pulse drive the psychotic tick of the stock market tape. Once you feel the pulse, then and only then can you figure out how everyone's wrong about tomorrow, next month or next year. And believe me, they're always wrong. Stocks rarely tread water." (WSJ 9/25/17)

Mast organizes **investment research, decision criteria, guidelines and relationships within an ordered investment universe**. It is important to identify when financial assets are substantially out of line from normal/average standards and behavior. It is also important to **monitor and to maintain investment structure** when financial assets are within some normal standard of risk and return. The key is maintaining the information in the investment universe for financial assets (indexes, asset classes and individual securities). Update the whole universe with all the new information and data, see how it is ordered each day. Many days decide to make no changes. Some days make some adjustments for those items getting to the fringe of the universe.

"A direct line of historical development connects pioneering efforts at data compression to today's **quest for a unified theory of nature's operating system**. Presently, we've boiled it down to four forces – gravity, electromagnetism, and the weak and strong nuclear forces. Take together, the brilliantly successful equations for these forces constitute what I call the

Cork Theory. They fit comfortably on a T-shirt, but they provide a full, well-tested foundation for chemistry, astrophysics, engineering, elementary particle physics and a lot of cosmology. But four forces are more than one, so we're still trying to compress things further. **Compressing data is only half the story, of course. We must also be able to get useful information back out**. Solving the Core Theory's equations to predict, for example, the structure of large molecules, is hopelessly time consuming. Quantum computers may change that picture someday, but for now, experimental chemists are still in business, even though we have equations that could do their work. In other fields, such as **economics, crucial experiments are hard to come by, and big data rules. Here the goal is to form a compressed representation of the data that humans can understand**. But that isn't always possible. Some data, such as long strings of random numbers, can't be compressed: such a string has no description shorter than itself." (WSJ 9/23/17)

Long strings of random numbers have no description shorter than itself. That is an apt description for investors' emotional stream- of- consciousness attachment to stories, new events and new data. It is a combination of human nature and big data, not to mention wealth management story marketing to attract that human nature. Mast offers an **accurate and useful order among economic factors, business conditions, market conditions, financial asset value, financial asset momentum and financial asset related risks and expected returns**. These serve investors as a constant and **consistent framework** within which to place in perspective random stories, events, product methods and engineering. Financial assets and securities are always understood related to themselves, to other securities and to broad investment markets. Decision criteria are consistent, replicable and accessible. It is useful for investors as a **check against financial product marketing** and for their own **adoption, maintenance and adaptation of portfolio action**. The investment reports and letters issued at the Mast website reference these criteria and **relationships in light of and in spite of each week's volume of data stories** and product excuses. In the next two months, we will introduce some amazing data sheets with more context and history to keep our **clients and readers centered in a real investment universe**. It is unnecessary to join most investors in the fringe orbits of wealth management products and marketing. Mast clients and readers are **equipped with tools useful for measuring risk and return**, to decide acceptance or rejection of those terms. Contact us with questions about use of these tools because your familiarity with them is both investment offense and defense. You deserve insightful stability.

Respectfully,

Jim Henderson
Mast Investment Advisors LLC

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Firm Description:

- Mast Investment Advisors LLC is Registered Investment Advisor (RIA) in the state of Illinois.
- Mast Investment provides active index money management services for its clients.
- To minimize trading expenses and to preclude conflicts of interest, Mast Investment manages its clients' assets on a discretionary basis at independent discount brokerage firms.
- Mast Investment receives fees only from its investment clients for this service, and receives no compensation or consideration from any other provider of financial services or products.

Investment Thesis:

- Active money managers (portfolio and mutual fund managers), generally under perform passive equity and fixed income indexes, and create much higher costs and expenses.
- The overwhelming portion of investment return is determined by strategic allocation to asset classes, and not by picking individual securities or funds.
- Over extended periods of time, different asset classes, and different components of those asset classes, perform better than others.
- Investors will, generally, be better served by utilizing index investments, and specifically, those index investments which may perform better than others. Index exchange traded funds provide broad diversification and direct replication of specific index performance.

Investment Methodology:

- Using models previously used over a ten year period for individual stock selection, Mast Investment created models to identify and to monitor superior index performance.
- Mast Investment changes asset allocations among asset classes, and within asset classes, based upon risk adjusted fundamental and technical analysis.
- Each client has a specific, neutral asset allocation provided, preferably, by an investment policy statement from a plan provided by a Mast Investment approved independent financial planner.

Investment Team:

- James D. Henderson, with 25 years of investment management experience, Kellogg MBA, Duke BA, is manager of Mast Investment in its Northfield, IL office.
- Research and decision criteria are in consultation with John R. Tilton, CFA and his investment research models.

Management Fees:

- Fees (generally 1% per year) and other important disclosure information are contained in the firm ADV, filed with the state securities department, and provided to all clients and prospects by Mast Investment.

Investor Communications:

- Clients receive monthly statements from their broker, quarterly statements, performance reports and billing statements from Mast Investment, and monthly investment letters.
- Current, and all previous, investment letters are posted at the firm website under the communications section.
- With client approval, Mast Investment will work with the client's other professional advisors and planners, striving to integrate investment management with other financial needs and goals.