GREENLEAF® TRUST

Perspectives

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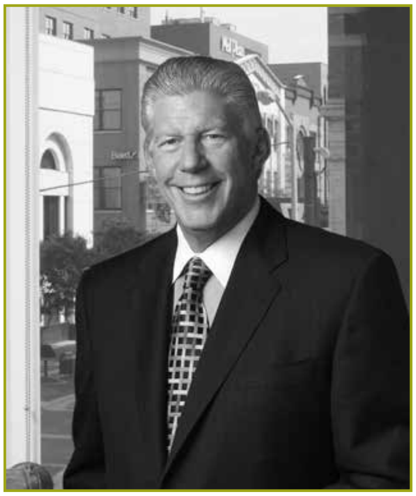

William D. Johnston
Chairman, Greenleaf Trust

Economic Commentary

With one third of 2014 in the books it is appropriate to do an update on the economy and evaluate where we are and examine the forward implications of our current condition. The recent jobs report gave rise for some optimism while simultaneously creating some "yes but…" dialogue. Let's examine the report. 288,000 jobs were created, a solid number that was generally well received. Unlike some previous reports, the most recent data revealed a larger percentage of job gains were in professional services such as engineering and science rather than the lower wage service sectors. Almost all of the job gains were in non-government and non-farm payroll employment. The jobs report was accompanied by an unemployment rate that has reached a five-year low of 6.3%. Some will point to the shrinking labor force, now at a ten-year low of 58.9% of the civilian work force population, as a driving factor in the decline of the unemployment rate rather than the job creation number. That argument ignores the cumulative impact of steady progress on job creation. Year-over-year progress is becoming more, not less, impressive. Reported unemployment has shrunk by 16.5%, and there are two million more people working today than there were a year ago. U-6 unemployment, which is the most difficult segment of the unemployed to impact in a slow growth economy, is down by nearly 12%. Duration of unemployment now stands at 35 weeks, significantly down from its previous high of 45.6 weeks. All in all a welcome report that is dampened a bit by the knowledge that it will take similarly consistent progress each month to get us to our 2007 level of unemployment by the end of 2016, a full nine year journey.

The flat Q1 GDP report was expected and, essentially, was evidence that slow growth economies are fragile and vulnerable to natural disasters, geopolitical interruptions and, in the case of Q1, weather. The winter weather pattern of 2014 focused its fury on the most dense portion of our consumer population. As the quarter unfolded the real time data in durable and non-durable industries was mounting and the story was consistent — consumer spending was being deferred not by the economy but by weather. One had only to look at the record auto sales in late March and April to see the extent of the deferral. The personal savings rate was flat as was personal debt, but personal income for the year grew by nearly six percent. Consumer confidence registered a healthy 82.3% and the

Economic Commentary, continued

small business optimism index increased to 93.4%, leading most to forecast a stronger Q2 result is in the wings.

Factory orders, both durable and nondurable, grew for the reporting period and are up 9% year-over-year. The PMI index stands at 54.9%, a slight increase over twelve months ago but ahead of the 49% level of mid-2013. We have from time to time mentioned the Baltic Dry Index as an important leading indicator of large container shipping traffic. When that index expands it is the result of increasing commerce and conversely when the index shrinks, global economies are contracting. Year-over-year the BDI has grown or expanded by 16.8%. Case-Schiller data reveals continued growth in home prices as well as residential investment, permits and housing starts with only modest gains year to date in construction jobs.

Those who opposed the Federal Reserve's stimulus policies and actions have been warning of the inflationary impact of increasing money supply by what is commonly referred to as quantitative easing through the Fed's Troubled Asset Repurchasing Program, or TARP. Current inflation data is very benign, with year-over-year results flat and recent month-over-month increase well below 2%.

"In general, our current economic health is where we expected it to be — well along the path of incremental modest gains that, over time, make a difference in almost every indicator we study."

In general, our current economic health is where we expected it to be — well along the path of incremental modest gains that, over time, make a difference in almost every indicator we study. If we separate out the political perspectives of who gets blame or credit and which party's policies would have been more or less impactful, what we would have to conclude is that progress is being made. While it can never be enough for some critics, and certainly not enough for those yet unemployed, our collective condition is improved though still decidedly vulnerable to interruption, either inflicted upon us or done of our own choosing.

Absent of interruption, we look for GDP growth for the full year of 2014 to remain in a range between 2.7% and 3.3%, while unemployment should decline to 5.9% and inflation remains at 1.6%. Both political parties will have some fodder for mid-year elections though current data probably favors the Democrats, leaving the Republicans to offer that we would be in a better place if only they had been in charge. If our forecast holds, the economy is not likely to be a major issue in the mid-term elections this fall. In its place are likely to be issues appealing to each party's base and as much of the center right as they can appeal to. High on the list of Republican issues will be The Affordable Care Act, commonly referred to as "Obamacare." Closely following will be immigration, deficit reduction and a few that are left over that failed to resonate before but are hard to let go of for some. The Democrats seem most vulnerable on The Affordable Health Care Act, though that seems to be polling more and more in their favor in recent weeks. Some Democratic candidates who were distancing themselves from the President a few months ago are now cuddling up and seeking his fundraising prowess. They are likely to continue to press issues that appeal to their base, and stay away from those that create critics within interest groups who have been previously aligned with the party. The Keystone Pipeline will not get a legislative vote because the Democratic leadership has been told it will be a deal breaker for the environmentalists, even in the face of strong labor support for the project. It will be a balancing act to hold on to rather than close the ranks. Current polling suggests the Democrats will lose seats in both the house and senate. Polls are neither votes nor are they election results, and much will take place in the next seven months to determine the outcome. As always, it is interesting, frustrating, disappointing and comical to observe but we will keep our finger on the pulse of the process.

How different and more meaningful would the election be if the candidates running each committed to solving four to six really important issues, and also committed to abandon all temptations to be a demagogue or party clone on all legislation, instead they would commit to be a true representative of the people of his or her district. What if those citizens who went to candidate forums refused to accept routine party answers to really hard issues, but rather demanded thoughtful answers from a candidate that knows the problems we face and knows that we need solutions that make sense for the collective good of the people of this country and not for the political positioning. Niall Ferguson in his book *The Great Degeneration: How Institutions Decay and Economies Die*, published last year, spends a great deal of time looking at why institutions and societies fail. Ferguson is the Laurence A. Tisch Professor of history at Harvard University and has authored several books as well as produced the acclaimed PBS series on *The Ascent of Money*, which he also wrote. His work is well known and his latest book is not a comfortable read. He argues that civilizations fail because the four essential ingredients of economic, political, cultural and civil society decay. His arguments, while uncomfortable and challenging, are worth reading. How do societies change from accessibility to government through the vote to accessibility to those in power through political action committees? We will explore some of his other ideas in future issues and attempt to see if the parallels that he examines from previous civilizations are recognizable in our current state. If every congressional candidate were forced to present their platform, on economic growth, long term deficit reduction, accessibility to education, increased innovative plans for breaking the cycle of poverty and the return to investment in infrastructure, science and technology, the content of the conversation would be different and certainly more relevant to our future.

“What if those citizens who went to candidate forums refused to accept routine party answers to really hard issues...”

Michael F. Odar, CFA
President

Switch

At the beginning of 2013, we instituted a process improvement initiative as part of our overall strategic plan. That successful initiative evolved appropriately into Innovation in 2014. We think of innovation in terms of not just changing a few steps of a process, but instead erasing all of the steps and starting over to find the optimal path all with the end in mind – the client. Obviously, innovation involves change, which is something that is difficult for most people because it requires them to act differently.

In order for our innovation efforts to be successful moving forward, we needed everyone in the organization to embrace change. This comes from leadership. As part of our continuous improvement core value, our Executive Leadership Team (ELT) reads various non-fiction books together that we feel are relevant to our organizational improvement efforts and engage in monthly discussions of those books. The book *Switch* by Chip and Dan Heath has played an instrumental role in how we are approaching innovation and change within Greenleaf.

The book focuses on what is at the center of any change effort – people. Every person has an emotional side and a rational side. In order to drive change, you must appeal to both. You also need to clear the way for those people to succeed. The authors relate the tension between our emotional and rational sides using an analogy created by University of Virginia psychologist Jonathan Haidt in his book *The Happiness Hypothesis*. Haidt likens our emotional side to an elephant and our rational side to the rider of the elephant. The Rider provides the planning and direction, and the Elephant provides the energy. Although the Rider holds the reigns, if the Elephant doesn't want to go in the same direction guess who wins? To drive change, you must direct the Rider, motivate the Elephant, and shape the Path.

"Every person has an emotional side and a rational side. In order to drive change, you must appeal to both."

In order to direct the Rider, you need to follow the bright spots, script the critical moves, and point to the destination. We have found that following the bright spots is a useful tool for us. We look for teammates that are doing something exceptionally well, find out what they are doing differently, and then have them teach others. Script the critical moves and point to the destination means be specific and show people where they are going and why it is worth it. Once the Rider has been directed, it's time to motivate the Elephant.

Motivating the Elephant involves finding the feeling, shrinking the change, and growing your people. In other words, know which emotion to appeal to, break things down so they are not overwhelming, and instill a growth mindset with people. When we ask someone at Greenleaf to take on a large project, we make sure they shrink the change by putting together a plan and then break that plan down into smaller easily accomplished steps.

Finally, you need to shape the Path in front of the Rider and Elephant. Tweaking the environment, building habits, and rallying the herd all help to shape the Path. Behaviors will change when situations change. By making those behaviors habitual, they are not as draining on the Rider and subsequently more easily spread to others.

Switch considers change at every level – individual, organizational, and societal. The authors fill the book with illustrative examples and stories that highlight the behavioral science behind the lessons. We have been relating the lessons to our team in their coaching sessions and building the terms into our lexicon. The results so far have been rewarding and clients are benefitting, which is the goal of our Innovation strategic initiative.

And as I finish this article, I cannot help but think of a scholastic message to my two sons. See boys, even presidents of companies still write book reports on occasion.

High-Impact Philanthropy: A Family Affair

Daniel L. Baker, JD, CFTA
Vice President
Director of Business Development
Trust Relationship Officer

In 2012, American families and individuals made charitable contributions of over $228 billion. Foundations gave another $50.9 billion. Over 25% of Americans over the age of sixteen donate their time to or on behalf of charitable causes. Is it time and money well spent? We hope so. But, what if we could increase the impact of our giving by 20 percent? What if we could leverage our giving to promote family togetherness and multiply our legacy over multiple generations? Now, that would be really impactful.

With baby boomers having accumulated wealth over many years and/or inherited substantial sums from "The Greatest Generation," now is an opportune time to consider how to involve the next generation(s) in the charitable planning process. Our experience (supported by multiple studies) is that multi-generational discussions about charitable giving plans and priorities not only help ensure the successful transfer of wealth and continuity of family values, but also when done properly, help younger family members understand wealth not as an identity but rather as means to make a difference in the world.

Giving away money is easy. If you can sign a check, you can give away money. Getting the best possible

High-Impact Philanthropy, continued

"... what if we could increase the impact of our giving by 20 percent? What if we could leverage our giving to promote family togetherness and multiply our legacy over multiple generations?"

results for your money is a lot harder. Engaging your family in a common cause for the betterment of society and to build an enduring legacy is harder yet. But, if you are fortunate to have amassed enough wealth to consider giving some away, you or someone dear to you knows a thing or two about hard work. So if hard work is not an obstacle, let's look at how we might invest some time (and hard work) to maximize the impact of our giving-- not only on the causes we support, but also on the richness of the family experience.

The amount of money and time you choose to invest in charitable endeavors is not all that important to this discussion. Strategic giving can be impactful at all levels. Similarly, the vehicle you choose (e.g. direct gifts, planned gifts, donor advised funds, private [family] foundations, or community foundations) to carry out your giving plans is not overly important to this exercise—and that discussion is better left for another day.

What is important is a disciplined approach. We have found that families who work through the following four steps develop the most meaningful, satisfying and impactful giving strategies.

Step 1: Identify the values and beliefs that will guide your philanthropy.

Philanthropy, at its essence, is an expression of your values. At its most rewarding, it is thoughtful, strategic and impactful. Family philanthropy, done right, reflects the shared values and interests of all the family members involved. An examination with your family of your shared values will provide you with an appreciation of what you have in common at the most fundamental levels of attitudes and beliefs. It would be a rare instance if all family members shared common interests and lifestyles. However, all families share common values that can contribute to a sense of shared mission. Questions like these can help identify those shared values: What values did your parents pass on to you? What does the family stand for? What values guide the choices you make in life?

Step 2: Determine your philanthropic focus.

All philanthropy is personal. Philanthropists can, and do, support almost everything. However, if your family is committed to making a real change in the world (or even in your corner of the world), you will need to clarify your aspirations. As with values and beliefs, family members will bring their own aspirations to the table. If you have identified those common values and beliefs and overlay your focus discussions with them, you will be on your way to finding the intersection of individual family members' interests. Here are some questions to consider discussing with your family: To what issues or community institutions are you most passionately committed? How much does your family know about these issues? Do you know enough to intelligently assess ways in which your funding could matter? What offers the greatest potential for being the most satisfying experience for your family?

Step 3: Learn and Measure.

To make informed funding decisions and improve the odds that your giving will make a real difference, you will need to learn about the issues and needs in your community. Once you have identified the issues and needs your family is passionate enough about to invest its time and money, you need to be ruthlessly realistic about the resources you are willing and able to invest. You need to determine how you can best use those resources, both financial and non-financial, to achieve impact. Ask yourself: What does a successful outcome look like? Are there measurement tools in place or do we need to create them? Is success feasible given the resources we are willing to deploy?

Step 4: Organize the effort.

There are many roles and responsibilities in carrying-out a successful family giving enterprise. Regardless of the structure or vehicle you choose, you will likely need to consider who will be responsible for at least the following broad categories: governance, research, grantmaking, assessment, administration and systems, and investments. The importance of each of these multiplies with the size of your endeavor. How enjoyable and effective your efforts are will be directly tied to how well your efforts are organized. Family philanthropy is a group process which works best where there is a commitment by family members to work effectively to make decisions. Agreed upon ground rules and open lines of communication are a must. Taking the necessary time to reach consensus on these baseline matters is well worth the effort. Ultimately, you will need to be brutally honest with each other in deciding on a division of labor taking into account each other's strengths and the time and energy each can devote to the effort. If the task appears too daunting, consider engaging outside help to do those things the family is unable or unwilling to do.

The experienced professionals at Greenleaf Trust, and in our newly-formalized Family and Foundation Services Division, stand ready to help you and your family at all stages of your philanthropic journey. If this is an area of interest to you, we encourage you to attend our spring seminar entitled, "Philanthropy as a Family Value: Helping Your Loved Ones Help Others." We will be conducting the seminar in Kalamazoo, Bay Harbor, and Traverse City next month. For more information, please call us toll free at 800.416.4555.

> "It would be a rare instance if all family members shared common interests and lifestyles. However, all families share common values that can contribute to a sense of shared mission."

Investment Management for Organizations and Institutions

Mark A. Jackson, CFA
Wealth Management Advisor

Investing for organizations and institutions is different than investing for individuals and we want to explore where it is different and offer suggestions on how your organization or institution should interact with your investment manager or managers to improve the opportunity for financial success.

"Your organization or institution exists for a specific mission and the management of your organization's investments should contribute to this mission."

Investing for Institutions is different than Investing for Individuals

Your organization or institution exists for a specific mission and the management of your organization's investments should contribute to this mission. When determining a return requirement, an organization may share process steps that an individual may follow. For example, the requirement will be driven by the life cycle stage of the organization or individual, the specific financial circumstances of each class of investor and the financial obligations of the organization or individual. In terms of defining a risk tolerance, an organization may be better positioned to create a definition of its ability to take risk, while an individual may form his or her tolerance based on willingness to accept risk, rather than ability. In addition, while the unique preferences and biases of an individual may ultimately determine his investment strategies, an organization typically follows a more structured investment policy statement creation process, which specifically reflects the financial considerations of the organization. An organization must answer to a number of stakeholders and the investment process has to be responsive to this requirement.

A critical communication tool within your organization and with your investment managers is the investment policy statement (IPS). Before your organization constructs or amends its IPS, it should develop guidance for the following considerations. A thoughtful development of responses to these items will form the investment objectives and constraints that are critical components of your IPS.

- Income needs: What are the dollar amounts of your organization's investment income and cash flow needs, today and in the future and what is the timing for those needs? It may be appropriate to assign a specific investment income target to your investment portfolio.
- Inflation: Is protection against inflation's erosion of the purchasing power of each dollar of investment income a consideration? In other words, is it important for your income requirements to keep pace with inflation?
- Risk tolerance: What is your organization's risk tolerance within

the investment portfolio? This may involve determining the organization's sensitivity to price fluctuations on its investments, including any financial statement impacts. It may evolve into a definition of risk based on market characteristics, such as standard deviation.

- Time horizon: The organization or institution may have a charter which defines the mission of the organization in perpetuity, but the time horizon for a portfolio of investments may need to support or fund a specific and shorter income or principal need. Whether the purpose is to fund the financial obligations for a group of retirees or to support a new building project, it is important to define when the funds will be needed.
- Taxes: The organization or institution may or may not be a tax paying entity. You should define if the entity is concerned with taxes and how investment income and investment activity contribute to the organization's tax situation.
- Liquidity: What are the organization's needs for principal withdrawals from the investment portfolio, both scheduled and unexpected? You want to minimize the risk of forced sales of investments to fund cash needs by defining the amount and timing of scheduled needs for funds and creating a targeted, ongoing level of cash equivalents to cover unscheduled withdrawals.
- Legal: You need to define the legal requirements which impact investment decisions. These could include ERISA, state defined investment limits and constraints and required, minimum distributions from the investment portfolio.
- Unique needs and requirements: While generally less of an investment issue for an organization than an individual, it is important to define what could change any of the considerations listed above. For example, there may be a specific capital spending project that an organization is planning, an expectation that the actuary for a plan sponsor is changing the assumed rate of return or an anticipated capital contribution to the investment portfolio.

Interacting with your Investment Manager

The communication with your investment manager or managers should be viewed as an interactive and continuous process. At its most basic level, the process includes development and execution of the IPS, communication with the manager regarding the manager's investment strategies for achieving the objectives outlined in the IPS, reporting on progress toward achieving the investment objectives and providing feedback to the manager regarding updates to the IPS and performance.

"The communication with your investment manager or managers should be viewed as an interactive and continuous process."

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The IPS is the guiding document for the investment objectives, constraints, permitted investments, performance benchmarks, and your reporting needs. All of the work that you have done at the organization level to define the organization's income needs, inflation concerns, risk tolerance, time horizon, tax considerations, liquidity needs and legal requirements is included in this document. Setting performance benchmarks from the responses to each of these considerations is critical to the process and deserves a separate newsletter article. In the meantime, the general objectives for the performance benchmark or benchmarks, are that it should reflect the objectives, risk levels and universe of investable securities permitted by the IPS, the benchmark should be investible, meaning the items included in the benchmark could be purchased in the portfolio and it should be measurable. Depending on your specific organization's or institution's IPS, possible benchmarks may include market indexes, for example the Standard & Poor's 1500 and the Barclays Intermediate Government/Credit Index and/or the Consumer Price Index (CPI) plus a spending or withdrawal rate from the portfolio.

Through the IPS, the manager has a clear understanding of what you want the assets to accomplish for the organization and how those accomplishments or performance will be measured. The manager is then able to develop and execute investment strategies which are specific to your objectives, risk tolerances and constraints. Anyone should be able to read your IPS and understand exactly what you want the assets that are attached to that IPS to accomplish.

As mentioned earlier, performance benchmark development and selection are worthy of a separate discussion. For purposes of this article, we assume that appropriate benchmarks are defined and recorded in your IPS. A frequent question is how often performance versus a benchmark should be evaluated? We contend that attainment of your investment objectives should be measured over a cycle that is appropriate for your organization and at least a market cycle of 5 years. This time period allows for a smoothing of market index results and volatility in an inflation measure, such as the CPI. You should ask your manager for more frequent performance reports to track progress and results.

> "We recommend meeting with your manager or managers a minimum of twice per year to review performance and portfolio activity"

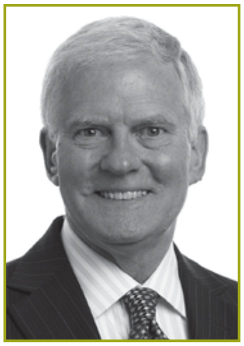
We recommend meeting with your manager or managers a minimum of twice per year to review performance and portfolio activity. This also provides your manager with an opportunity to update you on the manager's market outlook and investment strategies. Importantly, and this is not limited to the review meeting, it provides you with an opportunity to provide feedback to your manager, define other reporting needs and update the manager on significant developments at your organization which may impact the investment strategies or the IPS.

Conclusions

The process of using the IPS to document the mission, objectives and risk tolerance for your organization or institution improves the communication between you and your manager and increases the probability that your investment objectives will be obtained. Importantly, your IPS should be reviewed by your Board or Finance Committee at least once per year and the results of the review shared with your investment manager. Between these formal IPS review periods it is also important to exchange information which impacts the investment process. For example, a change in the amount or timing of a cash need or a new investment program being planned by your investment manager that may change your estimate of investment income or realized gains or losses for the year. Individual investors should create an investment policy as well. However, an organization has an obligation to create a document which reflects the mission of the organization and addresses all of its stakeholders and not just the needs of a few individuals.

Following a process for documenting your organization's objectives and tolerances and frequent communication between you and your investment manager contributes to the financial success of your organization and a long and mutually beneficial relationship with your manager.

"… a process for documenting your organization's objectives and tolerances and frequent communication between you and your investment manager contributes to the financial success of your organization…"



N. Dean MacVicar, CTFA
Executive Vice President
Director of Institutional Relations

Endowment Spending Policies

Much of my work over the last nearly 15+ years at Greenleaf Trust has been in the retirement plan area, but I have also devoted significant time to advising a number of our not-for-profit institutional clients and serving as the Trust Relationship Officer for various individual clients. Although the dynamics of each client type (and clients within each type) differ significantly, two common threads that seem to run through a very high percentage of the client relationships are investments and sustainable distributions. In this article, I will focus on endowment spending policies. A fairly large body of work exists on endowment investing, but the equally important topic of endowment spending is addressed less often. The prior article authored by Mark Jackson, pertaining to investment management for organizations and institutions, provides relevant information.

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The extent to which educational and non-profit organizations rely on endowment funds for budgetary support varies widely. For those organizations that have very large endowment funds, upwards of 30% or more of their operating budget dollars may come from endowment funds. Whether large or small, the investment and spending goals for endowment funds often include two components, (1) a goal of growing the dollar spendable amount each year, and (2) preserving purchasing power over time. Hence, it is logical to maintain an investment goal to achieve a long-term return equal to or greater than the sum of spending (withdrawals), investment and administrative costs, and inflation. For example, an overall goal of achieving a long-term return, after fees, of CPI plus 4.5% or 5% might be appropriate.

The spending policy methodology used by many organizations was first developed in the late 1960s, with a goal of dampening the volatility in spending. A commonly-used method of calculating spendable amounts applies a policy spending rate, typically 4% to 5%, to a moving average of market values over a defined past period, such as three, four or five years. For example, a fairly typical spending policy would be to apply a 5% spending rate to the average market value over the preceding 20 calendar quarters.

Whereas the use of a three to five year average market value as a component of the spending policy does provide for some smoothing effect, this simple method can have some flaws. There exist many variations and hybrid spending policy approaches that go beyond the scope of this article. One variation, however, may be worthy of mention, and that is the concept of implementing a ceiling and floor as part of the spending policy. The ceiling and floor components can come into play during periods of either a sustained up market cycle or a sustained down period in equity markets.

The impact that the 2008 financial crisis had on all of us is still somewhat fresh in our minds. It is times like that when a spending ceiling might come into play, especially if the market value averaging provision is short, such as three years. Consider a scenario where there is a 25% market decline over the averaging period. Without going through the math, and assuming a straight-line decline (which, of course, never happens), the calculated spendable amount may be a dollar amount that represents upwards of 5.8% or more of the current portfolio value, which borders on a percentage that is not sustainable. So, it may be advisable to impose a ceiling on withdrawals of, say, 5.5% to 5.75%. The reverse can apply in drastic up markets, or as a result of significant additions to an endowment fund, where the calculated spendable amount turns out to be a fairly low percentage of the ending portfolio value; in this situation, a floor on the spendable amount, such as 4.25%, may be feasible.

Again, there can be many variations and alternative spending policy provisions that can be activated given a defined set of circumstances, but the key elements of a spending policy should be aligned with the purpose of the fund and the overall investment and spending goals of the fund and organization or institution. The key principles in the Uniform Prudent Management of Institutional Funds Act (UPMIFA), which has been enacted by a majority of states, including Michigan in 2009, should also be considered in crafting both investment strategies and spending policies for endowment and other institutional funds.

We strive to promote strong stewardship of endowment funds with the organizations and their governing bodies that have entrusted us with oversight of endowment funds. To the extent that endowment funds benefit educational and non-profit organizations in the communities and regions within which we live and work, we all benefit.

"The impact that the 2008 financial crisis had on all of us is still somewhat fresh in our minds. It is times like that when a spending ceiling might come into play..."

Dan J. Rinzema, CFA, CFP®
Executive Vice President
Chief Client Officer

High Frequency Trading: Predator or Pest?

High-frequency trading, or HFT as it is more commonly known, has become a hot topic of debate in the court of public opinion. Much of the recent outcry stems from Michael Lewis' book *Flash Boys: A Wall Street Revolt*. As it happens, Lewis is one of my favorite authors, and like his previous works including *Liar's Poker*, *Moneyball*, *The Blind Side*, and *The Big Short*, I found his latest book to be an engaging, character-driven narrative that pulls the audience in by making complex, esoteric subject matter widely accessible. In the book, Lewis depicts high-frequency traders as market-manipulating, algorithm-wielding predators who do battle in microseconds (one millionth of a second), to the detriment of the average investor.

Lewis added fuel to the fire last month during his book tour appearance on CBS' 60 Minutes, when he claimed the stock market was "rigged" against investors as HFT skims fractions of a penny off each trade. Sensational sound bites may very well sell books, but is Lewis' characterization an accurate depiction of how markets actually function? Just how serious is HFT? And does it rise to the level of something the average investor should care about? To answer these questions and illustrate the contentious nature of the debate, let's first define HFT and then explore the divergent views held by two of the most cost-conscious retail investment firms — Schwab and Vanguard.

"Michael Lewis... during his book tour appearance on CBS' *60 Minutes*... claimed the stock market was "rigged" against investors as HFT skims fractions of a penny off each trade."

HFT involves the use of computers to trade multiple times in microseconds and remains a divisive practice. Some believe high-frequency traders provide liquidity and lower overall transaction costs, while others believe they unethically front-run and increase volatility. Here's how it works:

Let's say that you place an order to buy 1,000 shares of Apple stock currently trading at $600/share. Per the SEC's Reg NMS, your order is routed to multiple exchanges to guarantee that you get the best available price. Due to distance and varying communication speeds, however, your order arrives at each exchange at ever so slightly different times when measured in milliseconds (one thousandth of a second). High-frequency traders hold a big speed advantage due to significant investments in technology. Their lightning-fast HFT algorithms operating in microseconds (again, one millionth of a second) may be able to (1) "see" part of your order — say 100 shares — get filled on one of the exchanges, (2) make a statistical inference that you are looking to buy more than just 100 shares, and then (3) using their superior speed, jump ahead to buy Apple at $600/share on another exchange before the rest of your order actually gets there. They then sell it back to you at potentially a slightly higher price, such as $600.01 per share. By doing this sort of thing constantly, high-frequency traders can exact a small "toll" on large order flow one fraction of a penny at a time.

Those that view HFT as predatory are most alarmed when HFT firms pay for preferential access to exchanges, co-locate servers within exchanges in order to provide a speed advantage, and "ping" small orders to exchanges that immediately get canceled in an effort to discover intentions ahead of legitimate orders. Epitomizing the predatory argument against HFT, Schwab founder and chairman Chuck Schwab called HFT a "cancer" that "undermines the integrity of the markets." Schwab goes on to say that HFT is "corrupting our capital market system" by "creating an unleveled playing field."

Schwab's rhetoric reflects the overwhelming reaction to Lewis' book that ordinary investors are the victims of nefarious Wall Street, tech-savvy conspirators. On the other side of the debate, however, is Vanguard founder Jack Bogle, who is a well-known champion of the ordinary investor and fanatical about keeping long-term investor costs to a minimum. He believes ordinary, long-term investors are, on balance, getting a pretty good deal and that, "we are better off with high-frequency trading than we are without it" as it tightens spreads and enhances liquidity. Bogle goes on to say that HFT knits the various fragmented exchanges together and that without high-frequency traders, "you'll see a stock trading on a certain exchange at one price and trading on another at a different price. It's the high-frequency guys who are looking across all of the exchanges saying that doesn't make sense and they bring all the exchanges together at one point in time."

If you ask most investment professionals about the market, you're likely to hear how efficient trading is today, compared to 20 years ago — back in the era when orders got routed through human market-makers standing on the floors of exchanges. More efficient markets benefit all investors. In fact, higher volumes and electronic trading has meant that the spreads, the differences between bid and ask prices, have collapsed. They have actually gone down from 0.2% in the mid-1990s to 0.002% today.

Middlemen have always profited from trading — only it used to be more in the form of heavier commissions and wider bid-ask spreads. Now, it appears to come in much smaller, if more irritating, bites from HFT pests, at a far lower overall cost to investors. But, what is the actual monetary impact? A 2013 independent study examined blocks of trades coming through HFT firms and estimated that high-frequency traders have revenues of approximately $0.43 per $10,000 traded. In other words, the net loss to the average investor from HFT is very minimal, especially in light of the reduced transaction costs and greater liquidity that accompany electronic trading.

So, is Michael Lewis correct in characterizing HFT as predators devouring investors at warp speeds, or is HFT merely a pest that is at best irritating and at worst morally abhorrent? The answer depends on your perspective. Daytraders and hedge funds that flip millions of shares on a moment by moment basis obviously have reason for pause. However, individuals who are long-term investors as opposed to short-term daytraders, aren't impacted enough to be overly concerned with HFT from a purely financial perspective. For long-term investors like Greenleaf Trust, it is essentially a non-factor. That is not to say that we shouldn't push to reform structural market inadequacies. I believe that rebuilding a sense of transparency and fairness in the markets can be accomplished through modernized regulation against co-location, preferential access, and order pinging in addition to restoring the uptick rule and restricting information use within dark pools. The answer, however, starts with education rather than cultivating fear through media sensationalism.

Stock Market Pulse

Index	4/30/14	Total Return Since 12/31/2013
S&P 1500	436.43	2.31%
Dow Jones Industrials	16,580.84	0.82%
NASDAQ	4,114.56	-1.15%
S&P 500	1,883.95	2.56%
S&P 400	1,355.96	1.43%
S&P 600	651.97	-1.69%
NYSE Composite	10,627.18	2.18%
DJIA	553.58	13.98%
Barclays Aggregate Bond	108.59	2.61%

P/E Multiples	4/30/14
S&P 1500	16.9x
DJIA	14.7x
NASDAQ	20.7x
S&P 500	16.6x
S&P 400	19.9x
S&P 600	20.6x

Key Rates

Fed Funds Rate	0% to 0.25%
T Bill 90 Days	0.02%
T Bond 30 Yr	3.46%
Prime Rate	3.25%

Current Valuations

Index	Aggregate	P/E	Div. Yield
S&P 1500	436.43	16.9x	1.96%
S&P 500	1,883.95	16.6x	2.04%
DJIA	16,580.84	14.7x	2.17%
Dow Jones Utilities	553.58	NA	3.55%

Spread Between 30 Year Government Yields and Market Dividend Yields: 1.50%

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