Reflections & Observations

On Our Minds

Watershed moments mark a point in time after which things will never be the same, and we usually only recognize them in hindsight. We predict, however, that 2022 will be remembered as a watershed year for many reasons. Economically, it likely will be remembered as the year inflation returned after a 40-year hiatus. Geopolitically, the effects of the Russian/Ukraine war on energy and global trade will be long-lasting and will spur dramatic shifts in energy sources, policies, and alliances. And China, thanks in part to an inflexible and inconsistently implemented Covid policy that remains in place today, has accelerated its shift inward and increased its politicization of business.

Against this backdrop of global upheaval, the Federal Reserve and other central banks are fighting inflation. At the start of the year, the US federal funds interest rate was 0 percent in the US; it now stands at over 3 percent. The dramatic, unprecedented rate rise has repercussions for the global financial system and has exposed strategies predicated on the continuation of low inflation/low rate dynamics (in place since the 2008 financial crisis). Consider the UK pension crisis that was narrowly avoided in September; there simply can't be incentives to take risk for so long without casualties. And after an era of extraordinary loose money, risks abound.

In our spring newsletter, we wrote about how the mix of rising rates and global economic uncertainty would cause significant market volatility. September has certainly delivered plenty of it, further cementing its reputation as the worst month for the year for the stock market. Once again, we urge you to think about the long term as increased volatility and a recession are both likely. We wrote about the importance of staying invested in the spring; this time, we follow up with specific examples of stocks that—despite plenty of ups and downs—endured.

Investors, policymakers, and economists are all trying to make sense of this complex economy while economic indicators seem to be at odds with each other. In our piece on economic indicators, we delve into the details: what they tell us, why they are important, when they are used, and who uses them. You may be surprised by what you learn.

The economy is always evolving and changing, and companies must adjust forecasts and evolve with it. The pandemic, however, injected a heightened level of complexity, and companies are still struggling to manage the effects of it, including (1) fluctuating demand, (2) supply chain disruptions, and (3) unpredictable labor market dynamics. Companies continue to wrestle with these challenges today as demand shifts once again. Not only are inventories not catching up with quickly shifting consumer demand, but inventories that have been in transit for months are now arriving. Further, companies must balance the labor needs of today—when the labor market is tight—against the labor needs of the future, as the economy becomes increasingly uncertain. On the bright side, demand exists even in a recession, and we do our best to find it. There are many opportunities, for example, emerging from the broadening use of cloud technology and the rapidly expanding Internet of Things, and we analyze them in this newsletter.

As we all face a stomach-churning time in our economy, we recommend reading *The Good Life*, a book written by a friend of LBA that centers on the importance of happiness and how to achieve it. Happiness will not come from examining your portfolio daily; you'll find it by nurturing relationships with friends and family. We wish you plenty of quality time with friends and family as we head into the holiday season.

Diana B. Malcom
President

Lowell Blake

In This Issue

Staying Invested Part II

Investing for the Long Term: Compounding Takes Time and Progress Isn't Linear

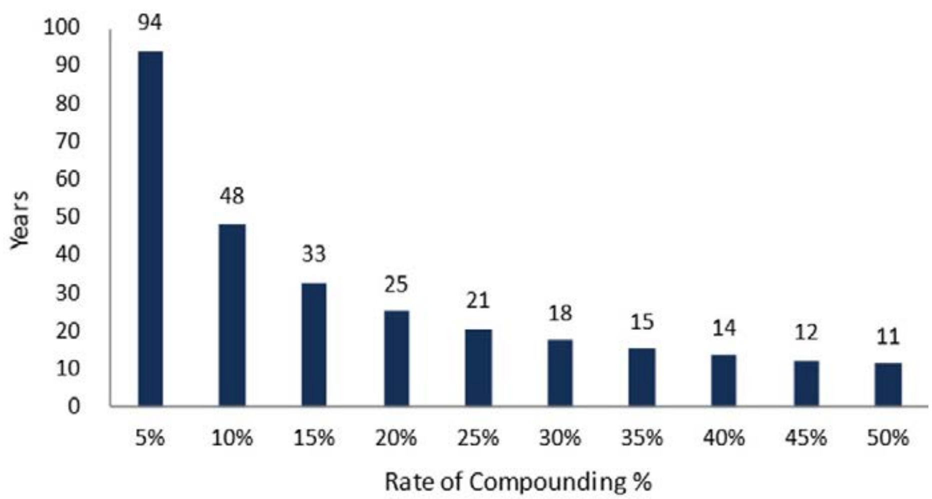
In our spring newsletter, we emphasized the importance of staying invested over the long term by (1) illustrating the outsized impact of the stock market's best days and (2) explaining how staying invested increases the likelihood of positive returns. While our analysis last spring focused on the broader implications of a long-term strategy, the strategy only works if the security you are holding is a quality company with durable, competitive advantages that drive success in both strong and weak markets.

In 1972, an investment manager named Thomas Phelps wrote a book, *100 to 1 in the Stock Market*, which analyzed companies whose stock prices had risen one hundredfold from their starting price (i.e., a $1 investment grew to at least $100). He studied stock price data from 1932 to 1971; within this timeframe, he identified 365 stocks that increased 100x. In 2015, Chris Mayer revisited the 100x concept and published his book *100 Baggers: Stocks That Return 100-to-1 and How To Find Them*. Mayer's book is a great read (we highly recommend it!) and, like Phelps's book, discusses 365 stocks that increased 100x but within a different time period (1962-2014). "The biggest hurdle to making 100 times your money in a stock," Mayer writes, "—or even just tripling it—may be the ability to stomach the ups and downs and hold on." To support this statement—with which we strongly agree—Mayer provides numerous examples of great companies that would have been tempting to sell at various points in time. Apple, an LBA holding, is a great example, "from its IPO in 1980 through 2012 [it] was a 225-bagger." Its 32-year trajectory, however, wasn't always smooth: investors had to stomach two peak-to-trough losses of at least 80 percent and countless other double-digit drawdowns. Since 2012, Apple has continued to compound tremendously (it's up roughly sevenfold from 2012). In 1980, not many investors would have imagined Apple would eventually become the $2.45 trillion behemoth it is today.

Patience + Pepsi = Prosperity

Pepsi is another example of a 100+ bagger. The company's tremendous track record is also notable because it spans decades—it was featured in both Phelps's and Mayer's books, published 43 years apart. Unlike faster growing companies like Apple, Biogen, or Dell, Pepsi's growth has been more measured, steadily compounding over time. As Mr. Mayer details, "it took the New York-based soft drinks and snack giant 28.5 years to hit 100-bagger status from 1962," slightly longer than the 26-year average for companies included in his study.

Figure 1: Years to 100x at Varying Rates of Growth



As shown in **Figure 1**, the rate of compounding dramatically impacts the time required to generate a 100x return. Even with a tremendous, 50-percent rate of growth, it would take over a decade to produce a 100x result. This point is vitally important—even with tremendous rates of growth, creating wealth takes time.

Source: Adapted from Chris Mayer's 100 Baggers: Stocks That Return 100-to-1 and How To Find Them

Pepsi's compounding journey started in the 1930s, after the company filed bankruptcy for the second time within ten years. Its compound growth rate dramatically accelerated in the 1980s when the company expanded internationally. This geographic expansion was reinforced by product line expansions: Pepsi created new markets (e.g., fruit sodas), acquired well-known international brands, and expanded into fast food. More recently, the company's expansion efforts have centered on acquisitions and organic product development; notable company/brand acquisitions include SodaStream, Muscle Milk, and Rockstar Energy Drinks, and Pepsi's new product development team launched Gatorade Zero, Bubbly Sparkling Water, and (most recently) Nitro Pepsi, a nitrogen-infused cola. With a tremendous track record of value creation and consistently high profit margins, it's likely that Pepsi will continue to create value for shareholders. This value creation probably won't be linear and, like every 100-bagger, it will take time. Since 1972—and despite several recessions and bear markets—Pepsi has delivered a cumulative total return of 45,601 percent, more than 15 times the S&P 500's 3,012 percent return for the same time period.

Leading Economic Indicators

Don't Wait for the Official Pronouncement: Track LEIs Instead

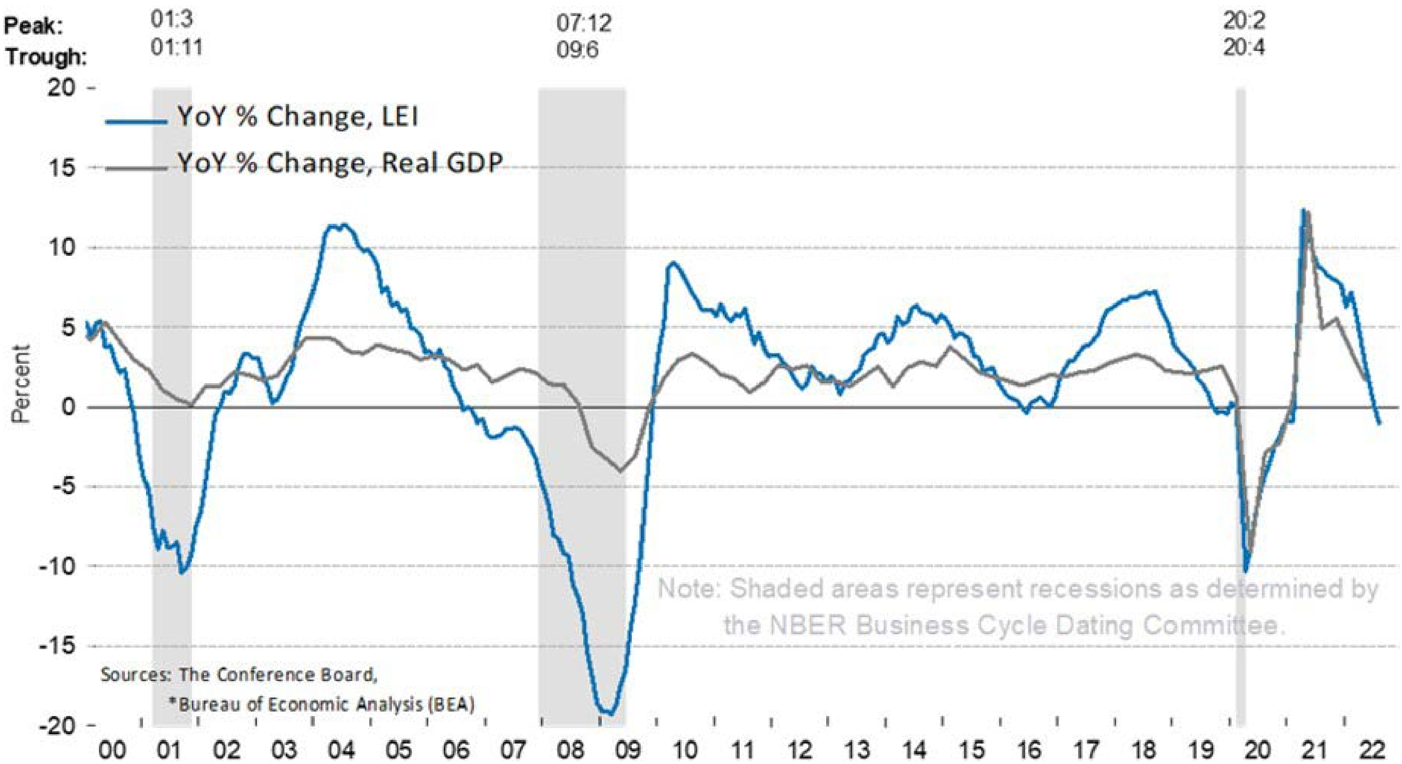
Two consecutive quarters of negative GDP growth has traditionally signaled that an economy is in a recession. However, in the US, the National Bureau of Economic Research (NBER) is responsible for officially designating recessions. The NBER's analysis relies on three criteria related to economic trends: depth, diffusion, and duration. The analytical process is lengthy—it involves collecting, evaluating, and modeling reams of data—and as a result the start of a recession is typically announced eight months after it truly began. (For similar reasons, the end of a recession is usually declared about sixteen months late.) While these official pronouncements from NBER may prove useful for academics, they are essentially useless for investors. The NBER's work is highly accurate and incorporates a comprehensive suite of past economic indicators, but financial markets are forward-looking. Investors must attempt to price future outcomes, not study what happened months ago.

Given the disparate needs of parties interested in the macroeconomy, it makes sense that economic indicators fall into three distinct buckets: leading (future), coincident (current), and lagging (historical). Financial market participants largely focus on leading indicators, while parties like the NBER and the Federal Reserve (Fed) study coincident and lagging indicators (even to make policy decisions!). The Conference Board, an independent research organization, publishes its popular Leading Economic Index (LEI) monthly. The LEI aims to predict turning points in the business cycle seven months in advance.

Indicators Included in The Conference Board's LEI

- Average weekly hours in manufacturing
- Initial jobless claims
- New orders for consumer goods and materials
- ISM® Manufacturing New Orders Index
- New orders for nondefense capital goods
- Building permits for new private housing units
- S&P 500 index of stock prices
- Leading Credit Index (LCI)
- Interest rate spread (US 10Y vs federal funds rate)
- Average consumer expectations for business conditions

Figure 1: Year-over-year change in the LEI, 2000-2022



Source: The Conference Board Leading Economic Index

As shown in **Figure 1**, the recent rate of change in the LEI is troubling, though not unexpected. As of the August report (released in September), the LEI has declined for six consecutive months—it is now 2.7 percent lower than it was in February—and, according to the Conference Board, is "potentially signaling a recession." The debate over whether the US is already in a recession after two quarters of negative GDP growth is ongoing, but for many, the LEI's contraction is further evidence that a recession is indeed here. If that's the case, though, it will still be months until the NBER makes its official proclamation and before data from coincident and lagging indicators catches up.

IoT and Data Usage

The Brains Behind Our Smart Devices

Over the last decade, we have seen the proliferation of "smart" devices—devices that collect our data and track our usage patterns to enhance our overall experience. There are smart mobile phones, TVs, speakers, and cars, as well as smaller everyday items like toothbrushes, vacuums, and coffee brewers. You may be wondering how all of these products became smart, seemingly overnight. What changed?

A collective network of devices and sensors, called "The Internet of Things" (IoT), allows devices to communicate with the cloud and with each other—in essence, to become smart. Some sources estimate the number of installed IoT devices in 2021 was 35B and forecast it to reach 75B by 2025, illustrating how we will be even more connected in the future.

These connected devices have changed our lives. We need smart TVs, for example, to access and watch (or binge?) internet-hosted content, such as shows from Netflix and Amazon, on a television screen rather than a computer screen. According to Nielsen, in 2021 more than 81 percent of US homes said they had at least one device that allowed their TV to connect to the internet, compared with 72 percent of households in 2019. And in July 2022, for the first time ever, Nielsen reported that Americans spent more time streaming content than they did watching cable TV. (Streaming captured roughly 35 percent of total US viewing time during the month, and the amount of time people spent watching streamed content was 23 percent higher than a year earlier.) As the number of connected devices grows, so too will the need for infrastructure to support it, and we believe two of our holdings, NVIDIA and American Tower, are in strategic positions to capitalize on these trends.

NVIDIA (NVDA)

NVDA—often at the forefront of innovation—is poised to capitalize on the deployment of 5G and the increased reliance on edge computing as "edge Artificial Intelligence" (edge AI) use spreads across industries.

Similar to edge computing, edge AI is the deployment of AI applications that are processed locally, either directly on the device or near the device. Its value lies in the increased automation, efficiency, and safety it brings to industries such as retail, manufacturing, and healthcare (see page 7). NVDA's EGX platform provides the computation power and the high-speed, secure networking capabilities that edge AI needs to operate.

American Tower (AMT)

The fifth generation (5G) mobile network, which is currently being deployed globally, will be critical to the evolution of smart devices. 5G enables faster download speeds, more capacity, and fewer delays—characteristics that will benefit smart devices. However, the network is still in the very early stages of a years-long and expensive deployment ('21 and '22 carrier capital spending will exceed $70B) in the US and Europe. As mobile network operators (aka wireless service carriers) focus on the scaled deployment of 5G, towers have proved to be the essential infrastructure for that network and should provide a tailwind for AMT for years to come.

While 5G provides a significant opportunity, it is not the only growth avenue for AMT. The amount of data being generated and stored by smart devices will grow exponentially for years and will necessitate the sizeable expansion of data center capacity. In November 2021, AMT acquired CoreSite Realty Corporation (CoreSite), which operates data centers in the North American market. As a result, AMT is not only a tower company; it is also a data company well positioned to capitalize on edge computing—the type of computing that allows smart devices to thrive. (Edge computing supports the processing of data close to the creation of data—within a smart device rather than in the cloud, for example. Keeping processing close helps data-driven enhancements run quickly and smoothly.

Edge computing and 5G will have a symbiotic relationship because edge computing will be essential to 5G's next generation of applications. The total addressable market of mobile edge computing is estimated to be $2.2B by 2026, and the opportunity has a compound annual growth rate of roughly 31 percent. It represents a significant opportunity for AMT.

How Will Edge AI Benefit Industries?

Retail

- Reduce shrinkage by identifying instances of product waste or sources of damage or theft
- Alert associates when shelf inventory is low

Manufacturing

- Perform automated quality control
- Analyze AI-enabled videos to identify unsafe working conditions

Healthcare

- Monitor patient condition and progress through AI devices placed in patient rooms
- Automatically screen for changes to patient vital signs, position, or behavior

Revocable Trusts

Key Attributes, Benefits, and Drawbacks

A revocable trust is an estate planning tool designed to manage and protect a grantor's assets during his or her lifetime. The flexibility and privacy the revocable trust provides makes it an appropriate vehicle for many people. Unlike an irrevocable trust, a revocable trust can be amended, or revoked entirely, at any time during the grantor's life because the assets remain a part of the grantor's estate. If the grantor becomes incapacitated, a previously designated trustee may step in on the grantor's behalf. Upon the grantor's death, the assets are distributed directly to beneficiaries—the hassles and costs of probate court are avoided completely.

Revocable trusts provide grantors key benefits at different life stages:

PHASE 1 During a grantor's life, a grantor may:	**PHASE 2** In preparation for future incapacitation, a grantor may:	**PHASE 3** After a grantor's death, the trust allows estates to:
• Set guidelines for the management of assets within the trust • Assign a trustee to manage assets as stipulated in the trust documents	• Appoint a successor trustee to manage the trust's assets • Retain the ability to change, amend, or revoke the trust	• Avoid probate court (often a lengthy and expensive process) • Remain private (unlike wills, which must navigate the probate court) • Detail how the assets flow after death (either distributed directly or managed by a trustee)

Notably, a revocable trust does not prevent estate taxes or protect assets from creditors. To achieve those goals, a trust must be *irrevocable*—that is, the assets must be removed from a grantor's estate (and control) entirely.

See disclosures on last page

How Might a Revocable Trust's Characteristics Benefit You?

Consider the following:

1. Do you want to be able to add and remove trust beneficiaries over time, for example, automatically include the addition of yet-to-be-born grandchildren? Revocable trusts make this easy. You'll simply need to draft amendments to the original trust documents each time you want to make a change.

2. Is retaining control critical to you? With revocable trusts, you can define what "incapacity" means and designate an appointee— a trusted, personal contact rather than the public court system—to decide whether or not you've reached that state.

3. Do you own property in multiple states? Consolidating those properties under the umbrella of a revocable trust will prevent probate in other states.

If you are interested in exploring how your estate plan could benefit from a revocable trust, please reach out to us.

Assisted Living

Evaluating Assisted Living Facilities: Four Key Considerations

Deciding whether assisted living is right for you or a loved one is no small task. The considerations surrounding a move to assisted living are extensive, and the choices and tradeoffs to be made can be overwhelming. The very first step in the process is to evaluate what kinds of services you need today and to consider what level of care you may need in the future. Some facilities may be able to meet both needs, while others may not.

The best way to assess a facility is to visit. Spend some time before meeting with a representative to observe the community independently if you can—do residents seem engaged and active? Are staff members friendly? Are shared spaces clean and inviting?

Some key questions to help guide your research are listed on the following page.

STAFF

- What is the nonadministrative staff-to-resident ratio?
- What educational and training requirements must employees have for their respective roles?
- How are employees screened and vetted?

COMMUNITY

- What types (e.g., athletic, artistic, volunteer) and how many activities does the facility offer residents? What is the overall participation rate in these activities?
- Is there a resident governance board and if so, how influential is it?
- What efforts are made to foster deep, lasting rapports between residents?
- Are pets allowed and if not, can they visit? What are the daytime/overnight visiting policies?
- How flexible is the kitchen—will they accommodate special requests for residents and visitors?

FINANCIAL

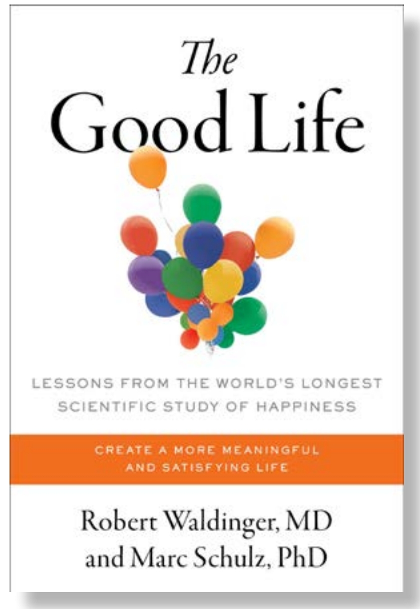
- What services are/are not included in the facility's base rate?
- When, and by how much, may costs increase over time?
- What has been the annual rate of increase for the base rate over the last five years?
- Are there any hidden fees or unexpected costs that may come as a surprise before or after an agreement is signed?

HEALTH & SAFETY

- Are there security measures in place to protect residents against unwanted guests?
- What protocols are in place for weather-related and other emergencies?
- Does the facility's state-filed accident/emergency records report raise any red flags?
- What medical resources are onsite? Nearby?

Recommended Read: *The Good Life*

What actually makes for a happy life, a fulfilling life—a *good* life? Robert Waldinger (a friend of LBA) and his colleague Marc Schulz, directors of the Harvard Study of Adult Development and leaders of the world's longest scientific study on happiness, share the surprising answer to this question in their forthcoming book, *The Good Life* (to be released January 10, 2023).



The book is a compelling read that brings remarkable, research-based insights to light through the life histories of dozens of participants in the Harvard Study. The research makes clear that contrary to popular opinion, wellbeing is not attained through financial success and achievement but instead flows from the quality of our relationships—whether familial, romantic, social, or professional. And, as *The Good Life* shows us, it's never too late to strengthen the relationships you have—and never too late to build new ones.

Click here to purchase *The Good Life*

Lowell Blake

Lowell, Blake & Associates provides personalized financial services and support for individuals, families, nonprofits, and businesses.
Reflections & Observations is our bi-annual newsletter to keep our clients and contacts in the know on new trends and valuable insight.

We love to hear from you – we invite you to share with us your ideas and feedback at info@lowell-blake.com.