Old West Investment Management, LLC

October 12, 2017

Dear Investor,

This year has absolutely flown by, and it's hard to believe the third quarter is in the books with 2017 in the home stretch. It has been a fascinating year with our new President keeping us on the edge of our seats. From his referring to North Korean leader Kim Jong Un as "rocket man", to breaking bread with Chuck Schumer and Nancy Pelosi, to threatening trade wars with many of our major trading partners, this unconventional President has broken all the rules of conventional Washington politics.

Despite the daily dose of controversial issues, the stock market continues to show amazing resilience. Market averages remain at or near all-time highs, with volatility at all-time lows. This continues to be the second longest bull market in history, and it's anybody's guess when it will come to an end. Our team at Old West believes in Warren Buffet's saying "be fearful when others are greedy, and greedy when others are fearful." Fearful we are.

As you can see on your statement, we had a good third quarter in all of our portfolios. Although we under-performed the market averages, given how defensively we are currently positioned, I'm pleased with the quarter.

The debate of active vs passive investment management is all but dead. Now that this bull market is in its ninth year and very few active managers have beaten the S&P500 over this stretch, it is now common and universal knowledge that passive index investing is the way to go. Until it isn't.

As we all know, the Federal Reserve bank stepped in during the Great Recession to help stimulate the struggling economy. With what became known as "quantitative easing", the Fed printed money out of thin air and bought government bonds and mortgage backed securities. This helped to suppress interest rates and stimulate economic activity. They did this several times over a number of years (QE I, QE II, QE III) and today the Fed holds $4.5 trillion of assets. This artificial suppression of interest rates (print money and distort the free market) has created an easy money environment that has caused assets of all types (stocks, bonds, real estate, art, bitcoins) to skyrocket in value.

I knew the Fed wasn't the only central bank in the world to do QE, but I was very surprised to see the extent to which other central banks bought assets, especially when compared to the size of their economies. The table below shows to what extent the world's biggest economies have been stimulated by central bank's intervention.

Central Bank	Total Assets	Annual GDP
U.S. Federal Reserve	$4.5T	$19.2T
European Central Bank	$5.1T	$16.0T
Bank of China	$5.2T	$12.0T
Bank of Japan	$4.7T	$5.0T
Bank of England	$700B	$3.0T
Swiss National Bank	$800B	$660B

As you can see from this table, we are milk toast compared to these other big spenders. Keep in mind this has never been done before, never in the history of the world. We are led to believe central bankers, who are almost exclusively academics, know what they are doing. I believe it's similar to Dr. Frankenstein working in the laboratory, having no idea what will be the final outcome.

Whereas our Fed has invested in Treasuries and mortgage backed securities (once again -with money printed out of the air) other central banks have taken it a step further, investing in the stock market. We were stunned to learn the Swiss National Bank is an active buyer of U.S. stocks. Here are their top holdings:

Apple	$2.9B
Microsoft	$2.02B
Facebook	$1.5B
Amazon	$1.4B

The Bank of Japan has also become a major acquirer of both domestic and foreign stocks. And the Bank of China? God only know how they have spent their trillions. The stock market has always been a tug of war between buyers and seller. Little did we know that central banks around the world were such voracious buyers in our markets.

With all of this liquidity sloshing around the world, it's no wonder cryptocurrencies (Bitcoin, Ethereum and more than 1,000 others) have been all the rage. The original idea behind the cryptocurrencies is the same reason we like gold, and that would be a mistrust of central bankers and a lack of faith in fiat currencies. A major difference between cryptocurrencies and gold is supply limits. While there are more than 1,000 cryptos and counting, gold supply is very constrained, with new mine discoveries falling at a rapid rate. There's a good chance cryptocurrencies are just the latest bubble, like tech stocks in 2000 and financials in 2007.

I believe another bubble forming is the index fund bubble. There are now more than $3 trillion invested in mutual funds and ETFs that mirror the S&P500. Investors buying the index are not reading annual reports, listening to quarterly management conference calls and pouring over financial statements. The S&P500 is a market weighted index so when you buy the index you are getting a lot more of the biggest stock (Apple) and very little of the smallest stock (Patterson Cos). This is a major reason the top five (Apple, Google, Microsoft, Amazon and Facebook) have exploded in value as trillions have gone into index funds.

The Fed is the first of all central banks to announce they will begin shrinking their balance sheet. The $4.5 trillion in assets they accumulated over the past eight years will begin to shrink, first by the Fed not reinvesting maturing securities, and then outright sales. This will be the reverse of quantitative easing, or quantitative tightening. This should begin to drive up interest rates, and it remains to be seen what effect this will have on equity markets.

Most bull markets end with some combination of excessive optimism and an economic slowdown. Neither of these are imminent at this time. Investor sentiment is currently cautiously bullish and our economy continues to produce positive, albeit slow and steady growth. I have no idea what the market will do tomorrow or the next year but our job is to find opportunity and avoid land mines. I'm very confident we own a collection of companies run by very talented owner/ managers, selling at market prices that offer us a comfortable margin of safety.

In every quarterly letter I like to highlight one of more of our holdings to give you insight into our thinking and investment process. I'd like to update you on a holding we previously wrote about, and then discuss a newer position in the portfolio.

IDW MEDIA (IDWM)

My partner Joe Boskovich Jr. discovered this company over a year ago, and Joe writes the following:

As you may recall, we wrote about IDW Media extensively in our Q3 2016 Investor Letter, and if interested, I'd encourage you to reread our investment thesis by accessing that letter on our website or by contacting our offices.

As you may recall from that letter, IDW is one of the fastest growing publishers of comics and graphic novels. Their success as a publisher has allowed the company to grow in many other areas, most notably an entertainment division called IDW Entertainment, which was tasked with financing the development and production of TV shows based on their large and valuable library of Intellectual Property. Their initial efforts have been very successful and led to the creation of shows *Wynonna Earp*, which airs on Syfy in the U.S., Spike TV in the UK and Australia, and Netflix globally, as well as *Dirk Gently's Holistic Detective Agency*, which airs on BBC America in the U.S. and Netflix internationally. Wynnona Earp was recently renewed for a Season 3, which will air in 2018, and Dirk Gently Season 2 debuts on BBC America next week.

In addition to these current projects, IDW Entertainment has dozens of projects in different stages of development. One of the more exciting projects is *Locke & Key*, which is one of the best-selling comic book properties in IDW Publishing's library. IDW hired Locke and Key's creator, Joe Hill, to write a television pilot and series format, and then took it out to the market place. IDW had multiple networks bidding for the property and ended up coming to an agreement with Hulu, where IDW Entertainment will act as the sole production company. Filming started in Canada at the end of September, and Season 1 should begin airing on Hulu in Summer 2018. With Hulu's branding power and monstrous acquisition budget for original content, we believe that Locke and Key will be a game changer for IDW, more than doubling the company's revenue and earnings in 2018.

When investing in smaller companies such as IDW Media Holdings, it is very important for our team at Old West to understand all aspects of the company's business as best as possible. As such, we have spent countless hours with the management team at IDW, and we believe that the company views us as a valuable shareholder and partner. In order to help the company's entertainment division grow, we introduced the IDW management team to Kerry McCluggage, and the company recently named Kerry to their Board of Directors. Kerry is a longtime friend and client to Old West, and eight years ago when we opened our doors, Kerry offered to be one of Old West's founding shareholders.

As many of you know, Kerry is an icon in the entertainment industry. He is the former Chairman of the Paramount Television Group, where he built an impressive career spanning all aspects of feature film and television development, production, programming, creative affairs and business development while bringing a number of hit television series to fruition such as "Frasier", "Cheers", and "Star Trek: Deep Space Nine, Voyager and Enterprise". Before joining Paramount, Kerry served as President of Universal Television. While heading its prime-time division, Universal established itself as a significant supplier of half-hour comedies such as "Coach" and "Major Dad", and simultaneously generated several successful dramas including "Quantum Leap", "Law & Order" and "Northern Exposure". Kerry began his career at Universal in 1978 as a programming assistant, and was promoted in 1979 to director of current series programming and in 1980 became Universal Television's youngest Vice President. After serving as an executive in charge of Universal's programming for ABC, Kerry was subsequently promoted to Vice President in charge of dramatic development for all networks and then Senior Vice President, Creative Affairs. In this position, he oversaw all development and production at Universal Television. "Magnum, P.I.", "The Equalizer", "Murder, She Wrote", "The A-Team" and "Miami Vice" were just a few of the series he developed.

We are thrilled that IDW placed Kerry on their Board of Directors, and we feel that Kerry will be very helpful to IDW's future growth. Included with this Investor Letter, you will find the Press Release from IDW announcing Kerry's board election.

ENPHASE ENERGY (ENPH)

Brian Laks is the newest member of our investment team, and he has become a tremendous asset to our company. Brian discovered this outstanding investment opportunity, and he writes the following:

Enphase is a provider of microinverters, a type of electrical equipment used in the solar power industry. Photovoltaic panels generate direct current (DC) electricity, which must be converted to alternating current (AC) before being fed into the grid. This conversion was traditionally done by a central (or "string") inverter, a piece of equipment designed to receive power output from all of the panels as a group. However, there are several potential problems with this design. A string inverter creates a single point of failure, which if needed to be repaired or replaced would render the entire solar array inoperable. In addition, because the solar panels are strung together as a group, if any one panel has a performance issue (e.g. shade, malfunction, etc.) the performance of the entire system is affected.

Enphase has developed a different approach to power conversion that seeks to avoid these issues. Instead of a single piece of equipment, each panel receives its own microinverter that processes the conversion to AC. When combined with their energy management software, the individual panels can be monitored and operated remotely, optimizing the output of the entire system. This "better mousetrap" for energy conversion has seen rapid customer adoption since its introduction. Quarterly revenue for the company grew from $1m in 2009 to over $100m by 2014. Gross margins rose steadily from single digits to over 33%, the company was profitable and it boasted a market cap of over $800 million.

Yet after 2014 the solar industry went into a downturn. Falling energy prices made the use case for renewables less attractive. Increased competition among panel makers (especially in China) led to massive supply increases that caused price erosion throughout the value chain. Changes in regulatory policies added increased uncertainty to a market that had been initially supported by subsidies and other incentives. By the time we started looking at it in late 2016, ENPH had fallen to $1 per share, the market cap was under $100 million and there were serious concerns about the company's survival. The CEO was notorious for missing estimates, in one case disappointing investors only weeks after issuing updated guidance. Gross margins had fallen into the teens, insufficient to cover overhead at now-reduced sales levels, and the company had been forced to raise debt and equity to stay afloat.

As with any new idea, we turned first to the proxy to understand the insider ownership. To our surprise, there were several notable funds that held significant stakes, which we thought unusual for a company that was apparently circling the drain. Third Point, which had participated in the IPO, owned 14%. Madrone Partners, an investment firm with ties to the Walton family, was a 9% owner and their founder was a member of the board. Kleiner Perkins, a well-known venture capital firm, was also a large shareholder with a 9% position and board representation. Executives and officers as a group owned over 25% of the company.

The large insider ownership intrigued us and we began to monitor the company more closely to judge the probability of a turnaround. The company to date had shipped more than 15 million microinverters, representing 3 GW of installed power with 660,000 residential and commercial systems in over 100 countries. Given the popularity of their products and the long-term secular tailwinds for the renewable energy industry, we felt that if they could manage to get their cost structure under control the upside potential was huge. We began watching for any large insider transactions which might suggest that those closest to the operations were gaining confidence in a recovery.

In January 2017, they received a $10 million strategic investment from John Doerr, chairman of Kleiner Perkins, and TJ Rodgers, founder and former CEO of Cypress Semiconductor. As part of the investment, Rodgers was appointed to the board of directors. Rodgers has a long history in the technology industry, founding Cypress in 1982 and growing it into a multi-billion-dollar company before retiring in 2016. He had experience in the solar industry as chairman of Sunpower during its IPO. Well known for his strong views, he famously issued a lengthy rebuttal to an order of nuns who were demanding more diversity in his boardroom. Bringing in consultants from McKinsey whom he had worked with before, they began to grapple with the cost issues and initiated a company-wide restructuring.

In April they hired Badri Kothandaraman, another Cypress veteran, to the newly created role of Chief Operating Officer. Badri had a 21-year career with Cypress including 5 years as the head of Cypress India. His first impressions were that the company had excellent products but lacked a strong focus on costs. As one of the founders noted, Enphase had always been good at innovation but bad at running the business. They didn't have strong procurement and sourcing agreements, which were crucial given the average microinverter contained over 300 components. Costs were high due to warranties, servicing and freight, and there was a lack of pricing discipline.

To combat this, the company has adopted a number of lean manufacturing practices, optimizing their supply chain, developing multiple sourcing arrangements, instituting zero-based costing and an RFQ process. The product development roadmap has been accelerated; as Rodgers noted during a recent conference call, "they were using a calendar when they should have been using a clock." In addition to selling microinverters to solar installers as had been done traditionally, Enphase also began partnering with panel manufacturers to incorporate the microinverters directly into the panels themselves. These AC modules reduce costs and simplify installation, as well as provide the company with steady high-volume demand.

These initiatives have already begun bearing fruit. Gross margins, having bottomed below 13% in Q1 were above 18% in Q2, the highest level in the last 5 quarters. Cash burn was reduced dramatically and the company posted positive operating and free cash flow in the most recent quarter. With the release of their latest earnings report this past August, the CEO stepped down and the company announced that a successor would be named within weeks. We immediately suspected the cost-conscious COO would get the nod, especially given the short window they were using for a search, and our suspicions were confirmed in September.

Shortly after the announcement, we had a conference call with the new CEO, the CFO and Rodgers. In the next few months, the IQ7 version of their product will launch giving the company a single worldwide SKU. The ability to offer the same version of the product to all geographies further reduces the manufacturing costs, weight, and number of components. By the end of 2018 the IQ8 will launch, which represents the real blue-sky upside for this company as it is the first product that can work in both weak-grid and off-grid environments.

Many people are surprised to learn that most solar power systems only work in tandem with a functioning electricity grid. These "grid-tied" systems are unable to provide power in places where electricity coverage is spotty or non-existent. Having a product that can work in those environments substantially increases the total addressable market. During the conference call, the CEO cited India as an example. The Government of India has announced plans for 100 GW of grid-tied solar capacity by 2022, of which 40 GW is expected to come from rooftop solar. This is a huge opportunity given Enphase's current annual run rate is slightly less than 1 GW, and yet the estimated off-grid demand is an additional 100s of GW.

We continually monitor the progress the company is making toward its cost goals. We believe the plan they have outlined to reach a 10% operating margin by the end of 2018 is achievable given the product roadmap and cost reduction initiatives they have put in place. At that rate, we find ourselves today owning a company trading at less than 5x forward earnings before giving any credit to the above-mentioned revenue growth. We think this risk/reward is extremely attractive and look forward to owning this company as their future unfolds.

As we enter the last quarter of 2017, we are cautious and mindful that the market has risen for nearly nine years. At the same time, we're excited and optimistic about the companies we own. Thank you for your support and trust, and we look forward to growing your hard-earned assets in the future.

Sincerely,

Joseph M. Boskovich, Sr.
Chairman and Chief Investment Officer