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January 16, 2017

Dear Limited Partners,

2016 . . . what a year. Just after we sent out our holiday letter, the fund's performance climbed higher in December and we ended on a positive note:

Date	Open Square Fund I Performance*	S&P 500 Performance	Outperformance / (Underperformance)
January 1 – December 31	31.06%	11.96%	19.10%

\* Prior to fees.

In our previous letter, we described the performance as “average.” We said this because while many things went right for us this year, a few things went wrong. Let's talk about our missteps first because recognizing them should help prevent future ones.

### Lessons Learned, Tuition Paid

We completely misinterpreted some warning signs in our Allergan and Bellatrix investments, having failed to accurately account for the weaknesses of the management teams. Both were errors of commission. We rationalized that the value of the underlying assets could overcome what we considered questionable decisions. Management teams though can destroy asset values much more quickly than it can build them, and investors' confidence can suddenly evaporate. We experienced both; perhaps the former was really illusory and the latter ephemeral, but we should have taken pause, and next time we will.

Our second foot fault was to underestimate how far commodity prices could fall. Our thesis has been that oil prices were too low to be sustainable, and eventually prices would rise again. After oil prices fell from +\$100/barrel to sub-\$50/barrel in 2015, the market saw no reason why \$28/barrel wasn't an unreasonable price in 2016, and downward it went.

As a result, our investments in oil producers suffered greatly in Q1. We subsequently repositioned the portfolio to focus on companies that had a greater chance of surviving if oil continued to languish; companies that gave us a longer timeline. Fortunately, both oil and our investments lifted off from the lows, and at the trough we had increased our oil investments by 25%. So while we were wrong about the extent of the decline, we remained resilient and even increased our invested capital. Thus, two good lessons for us, the volatility in commodity prices can be much greater than even our most conservative estimates, but having confidence in our analysis gave us conviction to buy more during the difficult times. Overall good lessons, we just wish the tuition sometimes wasn't so steep.

### 2017 and Beyond

Someone asked us how we think the stock market will perform in 2017 and our response was “we don’t know.” We didn’t say it to be curt, but we’re reminded of this quote.

“The greatest enemy of knowledge is not ignorance. It is the illusion of knowledge.” — Stephen Hawking

While we certainly have a viewpoint about where we think the market may go (and certainly our investments), we’re on guard against thinking we know for certain. After having a positive year, this is where investors can become vulnerable. Just as our thesis is beginning to work, we have to keep learning to stave off ignorance because if we don’t, the Dunning-Kruger Effect may just get us!

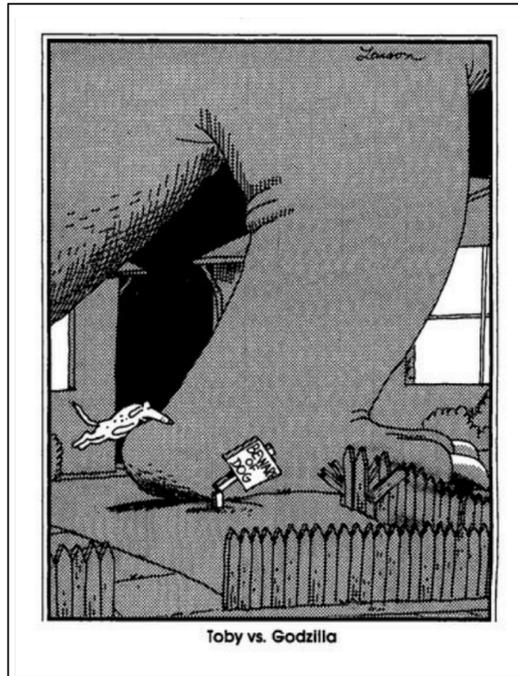
Named after two Cornell University scientists, David Dunning and Justin Kruger, this cognitive bias is often played out on Jimmy Kimmel’s segment “Lie Witness News”, when the show interviews people on the streets and asks them satirical questions like whether Bill Clinton gets enough credit for ending the Korean War, or if the 2014 Godzilla movie was insensitive to the survivors of the 1954 giant lizard attack on Tokyo that killed 100,000 people. To that question, one person answered “Yes, cuz it’s a travesty; it portrays death and loss,” . . . yikes.

The Dunning-Kruger Effect is a paradox. It’s the notion that if you’re incompetent, your incompetence masks your ability to recognize the incompetence. It explains why many incompetent people think they are not just doing fine, but great.

What’s important is to understand that “we don’t know” is liberating. That simple phrase frees us to know that it’s okay not to know. It means that perhaps it’s time we do some research and find out. What it doesn’t mean, however, is that we’re allowed to be cognitively “lazy”, that we don’t need to do the hard work that comes from researching and challenging our positions because choosing that option means we’re choosing to be willfully ignorant. Like Winnie the Pooh, we need to think things over, and think things under.

So although we’ve had some successes for 2016, we’re guarding against hubris, Dunning, and/or Kruger because psychologically even small “wins” can blind us with overconfidence. If anything, we know we don’t know, and we know for certain 2017 will bring many challenges, challenges that hopefully translate to opportunities and successes.

Even so, we’ll stay humble to the unknowns . . . lest we end up like Toby, who bit off more than he could chew that fateful day in Tokyo.



## Our Three Themes

Let's update you on our three themes again: oil, natural gas and undervalued companies.

### 1. Oil

As we described in our Q3 letter, the OPEC members came together in Algiers to announce an oil production cut. While the oil market responded positively, oil prices again declined over skepticism that OPEC could successfully allocate the cuts among its members.

On November 29, at a meeting in Vienna, Austria, OPEC members agreed to share a production cut of 1.2M barrels per day (bpd) for six months, beginning in January 2017. This was a historic agreement, as OPEC members seldom set-aside competing political and economic self-interest to collectively limit production. Non-OPEC countries (Russia, Mexico, etc.) also agreed to cut 558K bpd. Accordingly total production cuts pledged equaled 1.76M bpd.

The cuts have just begun, but the market is discounting the cuts because some producers will almost certainly cheat. It's hard to wrangle cats, and much harder when the cats are named Iran, Iraq, Venezuela, Nigeria, Russia, etc. We believe some cheating is inevitable, but contrary to the market, we don't believe the cheating will prevent oil inventories from drawing down. Given that supply and demand is already in balance at year-end, even a 60% compliance rate means that oil inventories will be whittled away at a rate of 1M bpd, effectively eliminating excess inventory by H2 2017. The cut simply accelerates the inventory decline, but overall that decline is inevitable.

We also think that compliance may turn out to be higher than most anticipate. We recently wrote:

“For us, it’s important to remember a key idea in the prelude leading up to the OPEC agreement and its aftermath, and that is this: [s]elf-interest will broker the deal, and self-interest will enforce it.” – *The Oil Deal – Pay Attention Because the Game Just Started* (12/2016)

Incentives matter, and Saudi Arabia, the largest producer for OPEC (accounting for 30% of OPEC’s 35M bpd output) will materially drive whether the production cut succeeds. As Saudi Arabia transitions its economy away from oil dependency, it plans to sell a portion of its national oil company (Saudi Aramco) in 2018. We described the rationale in our Q2 2016 letter by saying

“Vision 2030 is a strategy shift, and represents an attempt by the government to tackle its dependence on oil revenues and tack away from a future where its main product is no longer desired. With King Abdullah’s death early last year, and the ascension of Prince MbS’s father King Salman, Prince MbS now appears to have *carte blanche* to begin implementing his reforms. Consequently, we think that SA’s Vision 2030 plans can help serve as a guide to interpret SA’s oil strategy going forward.”

On December 24, Saudi Arabia announced it was planning to sell 49% of Saudi Aramco, a 10x increase from the previously announced 5% last year. This wasn’t much of a surprise for us as it was logical that Saudi Arabia would need to sell a significant stake if it were to fund the redevelopment of its entire economy. This, however, is the geopolitical equivalent of a mic drop and exit stage left.

If your family owns a gas station, and you’re now planning to sell it, is it really that surprising that you’re incentivized to cut oil production which spikes oil prices right before the sale? We don’t think so, so we’re simply following Saudi Arabia’s lead. You can almost hear Saudi Arabia quote the Roman Emperor Augustus as it exits the oil stage . . .

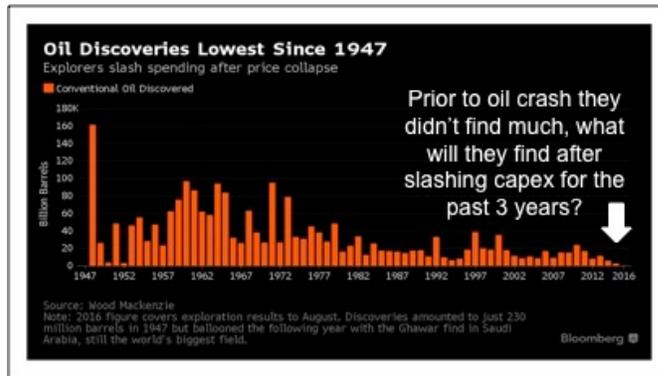
“Have I played the part well? Then applaud as I exit” – Augustus AD 14

#### A. What’s Next

While the market turns its attention to determining whether OPEC/non-OPEC members will cheat and weaken the 1.76M bpd cut, the industry is still under investing in oil.

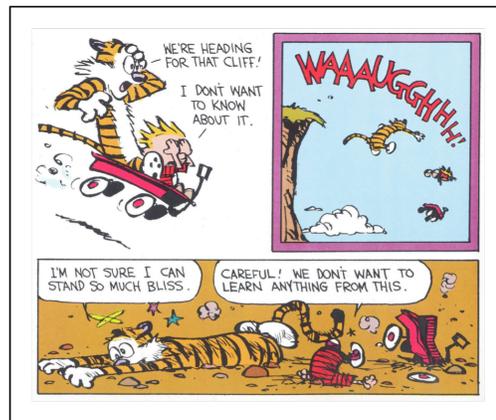
“We now project global E&P CAPEX to increase by **2 percent in 2017** – the first increase since 2014 . . . global upstream spending fell by 27 percent in 2016, following a 21 percent fall in 2015, reaching lowest levels since 2009.” James West, Managing Director, Evercore ISI

An increase of 2% is no increase at all when you factor in cost inflation. If record capital expenditures before 2015 led to this incredibly shrinking discovery chart, what will the three years of underinvestment bring? It's simply a bell that cannot be unring.



While pundits write breathlessly that oil prices have risen 20% in the past month, we believe they're introducing a fair amount of anchoring bias. We need to step back and understand that \$28/barrel is an outlier. It's as unsustainable as \$120/barrel, and just as the high-end led to a misallocation of capital to overly expensive projects (e.g., oil sands), the low-end leads to the starvation of capital. 2017 will mark the third year of underinvestment in oil, and we think by the end of 2017, oil prices will be much higher than \$53/barrel once the structural imbalance reveals itself via empty tanks. After that, don't be surprised if oil reaches \$100/barrel before 2020.

This explains in part our optimism for 2017. Oil is still only \$53/barrel when we know sub-\$70/barrel means supply can't keep pace with demand. We're geared to rise when oil prices increase. Are there risks to our thesis? Absolutely (e.g., economy falters, OPEC or non-OPEC cheats, Trump administration reforms lead to a bonanza for US shale, etc.), but we're fast approaching a cliff of insufficient supplies, and we think once again the world will experience a shortage . . . we're just a passenger in a car happily driven by those willing to go right off it.



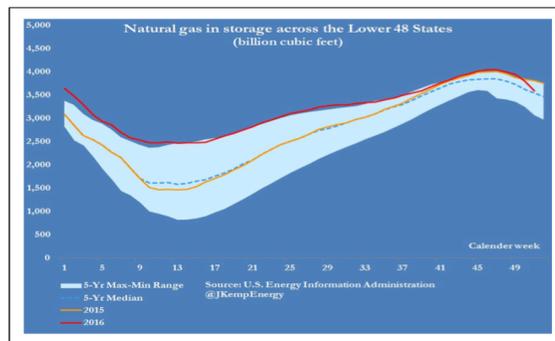
## 2. Natural Gas

Our investments in natural gas have proven disappointing thus far. Although above where we acquired them, they haven't kept pace with the broader portfolio.

January – March is when natural gas draws are the highest as the commodity is largely used for heating purposes, but recently natural gas prices have stayed depressed because of weather forecasts. We started December very cold, which resulted in high demand. Unfortunately, January is turning out warmer than expected. Fearing a reoccurrence of last year's warm weather and resulting inventory glut, gas prices have sold off, and our investments have lagged. This is acting as a drag on our portfolio performance, but we're not too concerned for a few reasons.

We think it's still premature to write-off the winter season, and even if winter weather turns out to be warmer than predicted, a structural imbalance already exists in the gas market. Cheap natural gas has incentivized more power plants to convert to natural gas from coal. Mexico is also importing more while concurrently US liquefied natural gas production is increasing. These are all major sources of demand that historically did not exist or were much lower. Weather gets most of the attention today, but underneath the affects of weather volatility, the newfound demand is steadily eroding inventory.

We project if production stays flat (which it almost certain given the low prices), we're headed for a supply shortage in natural gas by the summer. Just this past week, inventory is already below the 5-year average. So while supply and demand is very much balanced on an absolute level, it is very much imbalanced on our demand-adjusted models. See that red line heading lower? That's inventory, and it's trending in the right direction so expect prices to head the other way.



## 3. Undervalued Opportunities

Having sold Allergan a few months ago, we're now left with Apple as an investment in this third category. Apple continues to chug along, and 2016 marked an interesting year. People ask us all the time why we own Apple, contending that the best years of innovation are behind it. We

actually believe the opposite. Year after year Apple’s products still dominate their categories and the company continues to generate staggering amounts of free cash flow, cash that eventually will be returned to shareholders via a dividend or buyback. For 2017, two key items are piquing our interest: 1) evolution of services and 2) repatriation.

### A. Apple’s Services

2016 was the first year where Apple’s Services (“Services”) grew to become the second largest revenue generator for the company. Services is essentially the monetization of Apple’s ecosystem, and includes AppleCare®, Apple Pay, iTunes Store®, App Store®, Mac App Store, TV App Store, iBooks Store™ and Apple Music®. With all of the Apple iPhones, iPads, and computers sold, Apple has close to 1B active devices worldwide (i.e., users that have accessed Services in the past 90 days).

In 2016 Services also became more profitable than every other segment combined (excluding the iPhone). As the ecosystem has evolved, one-off transactions are now shifting to subscription and licensing based types of recurring revenue.

SINGLE TRANSACTION		→	RECURRING
Transactional	Warranty / Insurance		Subscription / Licensing
iBooks Store	AppleCare		TV App Store
iTunes Store	AppleCare+		Apple Music
			iCloud
Apple Pay			
App Store			
Mac App Store			

Now that Apple has a robust platform, it will continue to broaden and deepen the ecosystem offerings. We think the investment community is still too myopically focused on the hardware side of Apple’s business. They continue to ask the question “will the next iPhone, Apple Watch, or iPad succeed?” While pertinent, the question they should also ask is “what happens if Services, an increasingly stable, recurring and profitable source of revenue grows at 15% a year for the next five years?” That’s where things get really interesting for the stock, and why we think Apple’s stock multiple will eventually creep higher.

### B. Repatriation and Stock Buyback

Even if the stock’s multiple were stay below the market average, 2017 should still be a great year because of the potential for repatriation.

As we digested the news of Donald Trump's victory, our focus quickly shifted to the impact his policies could have on our portfolio. If the President-elect's tax plan is enacted we'll very likely see Apple repatriate a substantial amount of its offshore cash. In fact even before the election, Tim Cook, Apple's CEO, was already primed to do so, having stated in an interview on Irish radio.

“We provisioned several billion dollars for the U.S. for payment as soon as we repatriate it, and right now I would forecast that repatriation to occur next year,”

While he did not specify an amount, a reduced 10% repatriation tax would be a significant incentive to repatriate the bulk of Apple's offshore cash.

As of September 30, 2016, Apple had approximately \$230B in total cash. We've modeled a conservative \$50B in free cash flow for 2017, and assuming a 10% tax on repatriated earnings, we believe Apple could repatriate over \$200B of cash. We posit that if the company retains \$100B of cash (split 80/20 between the US and internationally), the company could still easily fund a \$150B share buy-back. At today's price, the company could reduce shares outstanding by over 20%, and assuming a flat stock multiple, the share price should rise above \$140/share. Although there will be some interest income lost (since the cash will have been spent), the reduction to earnings per share (EPS) will be slight, and the cash impact will be immaterial because fewer shares outstanding means less dividends will need to be paid.

Overall, however, a +20% increase in EPS and Apple's share price is very likely because of repatriation. Couple the share count reduction with an increase in EPS because of lower US corporate tax rates, we believe Apple's stock is primed to move higher. Even after all this, Apple would still retain \$100B of cash, a pile that will quickly rebuild in time.

### C. Odds and Ends

If the above isn't enough, there are two more things. As we approach the third quarter, and excitement around the iPhone 8 builds, the multiple could expand further, leading to a second increase in share price post-repatriation.

Lastly, if Apple were to introduce a streaming TV service this could provide another catalyst. We discount this factor though because of the numerous starts/stops to this project. At the same time, news of any progress on this front would still be a positive, so consider it a bonus, but we haven't baked in any earnings for it.

We think Apple's best days are still ahead, and the market is undervaluing these potential catalysts. In the meantime we're collecting a 2% dividend while we wait, and the stock managed to keep pace with the broader market last year. So thus far, our catalysts are coming for “free”, affording us time to be patient.

One more thing, we recently wrote a thought piece on Apple in the next 5 years, and how autonomous vehicles could impact Apple's Services. We've attached it separately should you care to read it.

### **New Positions**

To introduce our last section, here's my daughter Addy.



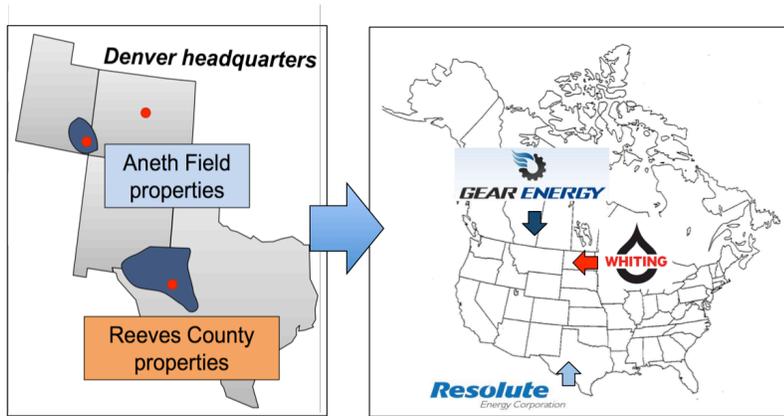
She's six, but apparently bypassed her youth and decided to emerge as a pre-teen. She's spunky and she likes it, which ironically makes my teasing of her all the more fun. As a Dad, I believe that I've been genetically assigned to pose nonsensical questions that exercise her fecund young mind (if the questions amuse me more than her, let's say they're lessons in tolerance).

“Addy, if Goofy and Pluto are both dogs, how come one walks and talks, but the other doesn't?”

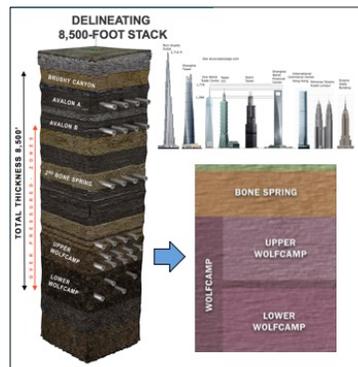
Cue the eye-roll and her answer . . . “daaad, things can be the same and be different.” Thanks kiddo, you just summed up our newest investment, Resolute Energy Corporation.

#### 1. Welcome to the Permian Basin

Resolute Energy Corporation (REN) is an upstream oil-driller headquartered in Denver, Colorado. We've been searching for a smaller Permian player to complement our other oil bets, one similarly torqued to the upside if oil prices keep climbing and REN fits our criteria. The company is exploiting the Permian basin in Texas and the Aneth Field in Utah, and its focus on a different resource basin helps to diversify our oil investments from a geographic and geologic standpoint.



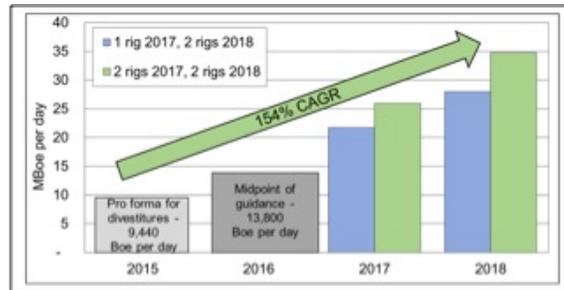
The Permian basin in Texas is currently experiencing a boom; some would even say a bubble. This is mainly because the basin is a “stacked-pay” potential as the various geological layers give operators the chance to extract oil/gas at different intervals. Companies only have to drill one well to tap different layers, increasing capital efficiency dramatically. REN’s acreage in Texas includes some of the most prolific drilling spots in the country. Here’s an illustration of how deep these resources basins extend:



REN is currently targeting the Upper and Lower Wolfcamp segment, which is about 8,500 feet below the surface. This is the equivalent of stacking 5 One World Trade Center buildings one on top of another, but straight down, then drilling horizontally for 2 miles.

It hasn’t always been easy for REN and 2015-2016 were brutal years. Like many oil companies, REN entered the oil downturn with too much debt, forcing it to divest significant assets in Texas and Wyoming to deleverage and survive. In December, REN also issued common stock to pay off its credit facilities. As a result of the deleveraging and significant production growth, REN’s stock has increased substantially in the past six months.

REN fits our thesis and its recent de-levering allows us to buy into a company that is growing dramatically and has a sufficient inventory of wells to sustain that growth.

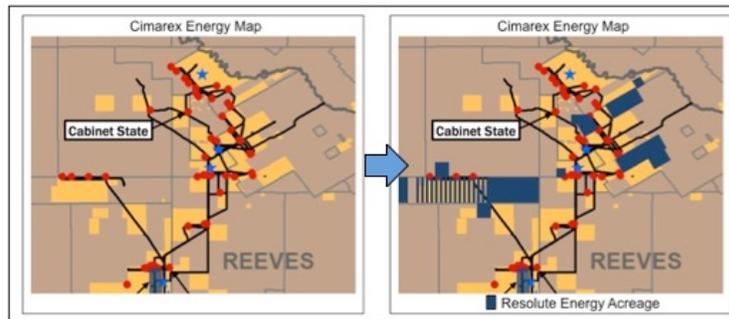


With \$400M remaining in debt, we anticipate the company can grow 2017 production to 9M barrels of oil equivalent and generate \$175M in Adjusted EBITDA at \$55/barrel. This would give it an operating leverage at the end of 2017 of around 3x, even at today’s oil prices. As the year continues, the stock should rise further when the market begins factoring in 2018 forecasts. Preliminary plans for 2018 is to lift production by 40%, and if oil prices keep rising, the operating leverage will be tremendous.

We entered our position at \$41.58/share, and believe the stock is undervalued compared to what the company will be producing in 2018 and where we think oil prices will be at by year-end 2017. We anticipate the stock could be worth north of \$100/share if the company executes on its production plans and if the wells perform. Many “ifs”, but we have confidence in the management team as they’ve successfully navigated the lows and recapitalized the company.

A. Consolidation?

Having said that, we anticipate that a larger Permian player may acquire the company. As oil companies drill longer wells, it helps to have contiguous land, and we’re beginning to see drillers consolidate surrounding acreages. In the map below we’ve overlaid REN’s acreage on top of a competitor’s map (Cimarex Energy) just to illustrate our point.



Like a puzzle piece, we can see that it makes sense to “block-up” the parcels when wells are approaching two-mile lengths. Suffice it to say, we have many paths to a successful exit, so any one will do.

In order to acquire shares of REN, we sold one of our natural gas holdings, Antero Resources. Antero accounted for 20% of our total natural gas positions, so our natural gas holdings have fallen from a 1/3<sup>rd</sup> allocation to about a 1/4<sup>th</sup> allocation for the portfolio. Not a large decrease, but something to note. Again we still have high confidence for in natural gas thesis, but the chance to buy REN after its most recent deleveraging event was an opportunity we didn't want to pass-up.

### **Administrative and Other Parting Thoughts**

So that concludes our first full calendar year for our Open Square Fund I. We're been proud of many achievements, humbled by some mistakes and ultimately wiser for all of it. Through it all it's the support of family and friends like you who've made the journey easier, so we thank you.

Our wonderful accountants (HC Global) having wrapped-up our books for 2016, will now turn their attention to the fund's tax returns and K-1s so we'll provide you with updates as we receive them. We've made an effort to harvest investment losses in 2016 wherever possible given impending tax law reforms, so we don't anticipate much, if any, capital gains for last year.

Some of our limited partners have elected to add to their accounts. Just note that any additions are typically invested at the beginning of the month (so additions now will be invested beginning February 1). If you'd like to withdraw funds, withdrawals are done at the end of the month (e.g., January 31) for simplicity.

Finally, as we enter 2017, we'll begin focusing on growing our partnership so as to make it more sustainable. We're always happy to add additional partners, so please feel free to refer any potential partners if you've been pleased with your investment results. We've also redesigned our website, and additional information can be found at [www.opensquarecapital.com](http://www.opensquarecapital.com).

In closing, we hope you had a truly wonderful holiday season and wish you a belated Happy New Year. We're looking forward to 2017 and seeing how our ideas work out. Thank you again for investing.

Sincerely,



Nelson Wu  
Managing Director

Enclosures