HORIZON KINETICS

3rd Quarter Commentary

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Preface to What is Defensive or Moderate Risk Investing?

Depending on the particular strategy, our equity portfolios generally have cash balances in the 25% to 35% range. It's the result of a process we began over a year ago. It is worth noting that this cash has not impeded the performance in any obvious way. Some of our equity strategies are ahead of the market so far this year, some behind. Some that are behind were ahead a month or so ago, and some that are ahead now were behind. In fact, on about 20% of the trading days this year, our portfolios returns were in the opposite direction than the S&P 500, and typically by over a half percentage point, often by a full percentage point. Let's just say, for the moment, they're neither better nor worse overall.

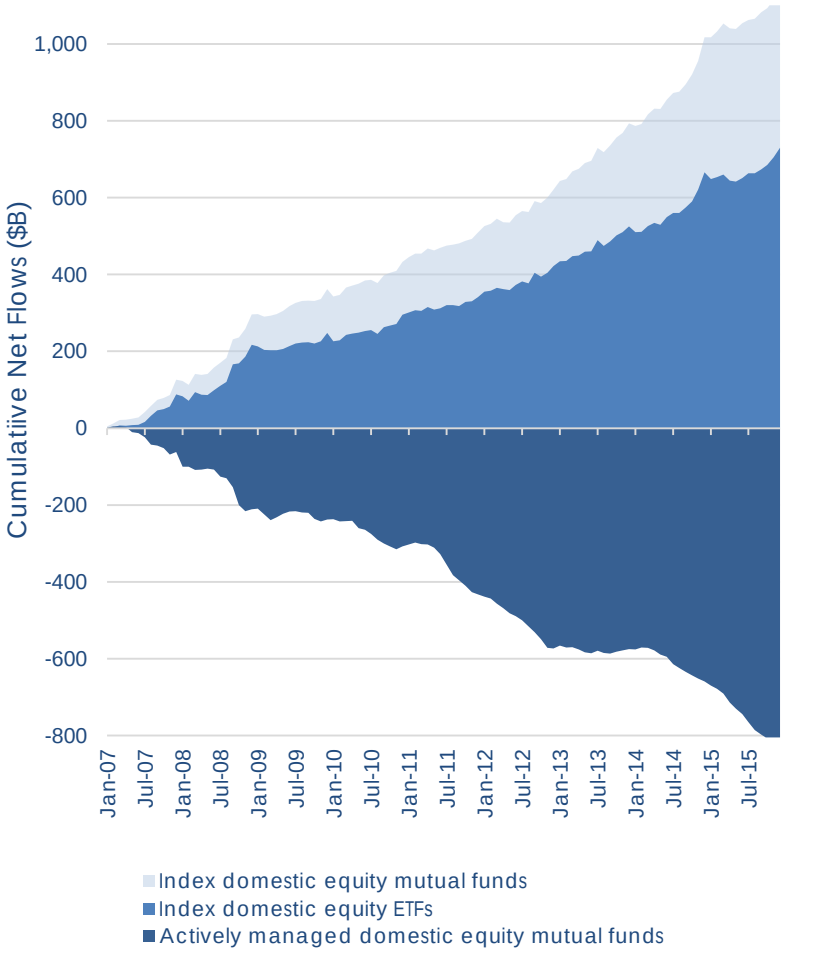
But our portfolios contain two features of great value that the market does not: 1) a lot of cash; and 2) idiosyncratic securities – stocks (and maybe a couple of interesting bonds) that we believe will behave more in accord with their own particular business and valuation characteristics than with the systemic factors that drive the market indexes in lock-step. Nowadays, you don't want to be too close to that.

Using Core Value, only 5 of the holdings are in the S&P 500; for the Small Cap strategy, 1 holding is in the top 500 companies in the Russell 2000; for the Research strategy, only 2. That top portion of the Russell 2000 accounts for 61% of its value. If one wished to find an ETF with that little exposure to those two representative indexes of large- and small-cap companies, it would be very challenging – maybe it can't even be done. So there is perhaps a third, related feature of value in these portfolios: scarcity.

		Index Overlap		Active
Strategy	**Cash**	**# Secs**	**% of MV**	**Share**
Core Value	31%	5	10%	98.2%
Research Select	23%	8	10%	99.6%
Small Cap	40%	9	4%	99.7%
Strategic Value	34%	8	9%	98.3%
Spin-Off	37%	11	9%	98.0%

Attention to these two issues, liquidity and securities with idiosyncratic characteristics will become increasingly important. Particularly for people who believe they are appropriately diversified and in defensive equity sectors in the manner now generally practiced. This was the topic we presented a few weeks ago at the Grant's (Interest Rate Observer) Fall Conference. That the channeling of the $2+ trillion flood of assets into index funds since the 2007 Financial Crisis forced ETF organizers to focus on the largest companies with the most share trading liquidity. The sheer weight of that much money into the rather limited number of companies large enough to absorb that much demand for their shares has distorted prices to an extreme degree. It's simply a matter of supply and demand – no one who has ever visited a Middle-East souk or a farmer's market or art auction is confused by what moves the prices. Yet in the stock market, the influence of the same forces is still generally unnoticed (although not by the Grant's audience).

So we'll just focus on how the modernized practice of indexation has distorted "defensive" equity investing. This should be prefaced by an understanding that indexation as originally conceived by the academic founding fathers of indexation involved simply owning the entire market, simply being a participant in the results of all stocks: large, small, fast growing, mature. After making a long-term asset allocation decision, one would decide how much to place in stocks, how much in bonds, how much in cash as a risk balancer. Very little cause for adjustment. The idea of industry sector funds, style funds, country funds, runs counter to the very mechanism they were proposing to avoid the perennial challenge: how does one even begin to understand the risks entailed by the 1,594 different ETFs traded in the U.S. as of year-end 2015 (specifically, 360 broad-based, 266 sector funds, 592 international, 81 commodity, 21 hybrid and 274 bond ETFs). Which do you buy, when do you sell, and why?



Source: ICI Fact Book

Let's Test an MBA

To start, let's take an MBA from a top business school and challenge this recent graduate – perhaps an applicant for a position on the Horizon Kinetics research staff – to construct a defensive equity portfolio. Such a graduate will have some fluency with the statistical measures of risk, such as standard deviation of the share prices of a company or sector; β, or beta, which takes price volatility and compares it the market's volatility. There will be knowledge of differing business models, such as the inflation-beneficiary aspects of a portfolio of commercial real estate with long-term leases. Or of utilities, with their regulated rates of return and near-term protection from changes in interest rates and the business cycle. These sectors would certainly find favor over industries subject to frequent product cycles and obsolescence risk like technology or biotech.

This person would be conversant with Efficient Market Theory and the uncertain results of active management versus the reliability of an index. There are other important analytical tools such as the dividend discount model. In the current low interest rate environment, this model will demonstrate the attractiveness of equities that have high dividend yields relative to Treasuries. For instance, a "dividend aristocrats" ETF will incorporate both a yield that is almost twice the 10-year Treasury yield, and an expectation of dividend increases over time, because these companies can reinvest a portion of their profits for future growth – a win/win formula. (REITs must pay out almost all their income, so they lack the same ability to self-fund their growth, and utilities have very little growth opportunity, so likewise pass out most of their earnings.)

Here is what an MBA might suggest.

- The iShares Select Dividend ETF (DVY), current yield 3.17%. Of more than 1,350 different ETFs in the U.S., with $16.1 billion of AUM this is the 21st largest – it's a top 1 percenter – a testament to its universal popularity.
- The iShares Cohen & Steers REIT ETF (ICF), $3.8 billion of AUM, 2.89% yield
- The iShares U.S. Utility ETF (IDU), $0.8 billion of AUM, 2.98% yield
- And, for a touch of growth, but with a particular eye toward safety, the PowerShares S&P Small Cap Low Volatility ETF (XSLV), $0.6 billion of AUM and a 1.99% yield.

By definition, these ETFs are statistically among the safest of stocks. This is expressed by their Beta, the primary risk figure used in asset allocation programs. As a test, simply go to Yahoo Finance, type in a symbol like IBM, and right there, alongside market cap and P/E ratio will be the beta; there is no other risk statistic provided up front like that. So the beta of the Dividend ETF, as of September 30th, is 0.61, meaning that it is considered only 61% as volatile as the S&P 500. The REIT ETF has a beta of 0.86, 14% lower volatility than the S&P 500, and the utility ETF beta is an amazingly low 0.13, 87% lower volatility than the S&P 500. The small-cap low-volatility ETF has a beta of 0.79.

If this portfolio were simply apportioned in equal quarters to each ETF, the average yield would be 2.8%, versus a 10-Year Treasury's 1.7%, and would be said to have much lower volatility than the market, as any back-test of the historical results would show.

Moreover, the 5-year annualized return of the Utility ETF is 12.2% through September 2016. For the REIT, the 5-year rate of return is 15.0%. The 5-year number for the Dividend ETF is 16.0%. And the low-volatility small-cap ETF only has a 3-year record, but it returned 11.8% annualized through October 12th, way higher than the 6.6% of the Small-Cap Index. Because of those high returns alongside the low volatility, there statistics like the Sharpe ratio that give these ETFs particularly high risk-adjusted return ratings and which make them highly valued in asset allocation programs.

Let's Grade the Test

So that's security selection the modern way: by external observation and categorization. A security or industry has a category description (such as large cap, blue chip, foreign, growth), it has a few valuation measures (P/E, dividend yield, recent earnings growth rate), it exhibits certain statistically reducible price behavior. These descriptive features, mixed and matched in any number of ways, are considered sufficient to select securities and assemble portfolios. And the resultant portfolio can be projected forward to estimate values or income at retirement.

It is not, however, company or security analysis. It does not suggest in any informed way how these businesses and share prices will actually behave in the future such as in the manner a business person contemplating purchasing a rental building or auto dealership might require.

Let's demonstrate just a bit of traditional investment analysis as both a contrast to this mechanical approach and also to see if a different conclusion is reached about the essential problem that was posed: to construct a defensive equity portfolio. We'll start with a couple of examples at the individual company level, then look at risk at the industry level as well.

Starting with the iShares REIT ETF, the largest 10 holdings account for 61% of the value of the ETF. This is a level of concentration antithetical to the thrust of indexation as a haven from security selection risk. Narrowly defined ETFs in particular, like sector funds, tend to get concentrated or top heavy relatively quickly as the companies sort themselves out into the more and less successful. Therefore, an accident with just one or two top holdings, even if there is no problem with the rest of the ETF, could sabotage the results in a way that is very un-index-like.

Company Example #1

The second largest holding in the iShares REIT ETF, at 7.0%, is Public Storage REIT. It is the largest such, directly owning almost 2,300 structures, and has a $46 billion market value. Like other storage companies, it raises its prices by about 6% a year, but expenses have been rising by only about 2% to 3%, which is a large reason for its 9% earnings growth rate. It earns a 22% return on its equity, so it is very profitable. It has also been an aggressive acquirer of smaller storage companies, which provides a path for growth. Given these unalloyed positives, the shares yield only 2.5%, less than the REIT ETF itself, and trade at 28x cash flow from operations. That's the good news.

iShares Cohen & Steers REIT ETF (ICF)		
SPG	SIMON PROPERTY GROUP REIT	7.9%
PSA	PUBLIC STORAGE REIT	7.1
PLD	PROLOGIS REIT INC	6.0
EQIX	EQUINIX REIT INC	5.6
HCN	WELLTOWER INC	5.6
AVB	AVALONBAY COMMUNITIES REIT	5.2
VTR	VENTAS REIT INC	5.0
EQR	EQUITY RESIDENTIAL REIT	5.0
BXP	BOSTON PROPERTIES REIT	4.4
	Total Weight, Top 10	**51.7%**

However, the barriers to entry in self storage are not high. Anyone who's been to a modern facility can see it: the low capital investment (no foundation, per se, just a concrete apron, the corrugated metal buildings and rooms),

the low operating expenses (the electronic key-card gate, movement-sensitive lighting, the security camera console and single employee). Therefore, there is much competition, and other large companies are engaged in the same consolidation strategy.

Period	# of Facilities Acquired	Sq. Footage Acquired (mill.)	Avg. Rental per sq. foot
H1 2016	24	1.703	$11.10
2015	17	1.285	12.87
2014	44	3.457	13.51
2013	121	8.056	15.15

Source: company reports

In recent periods there has been an increasing scarcity of good quality properties to acquire. This is not yet visible in the income statement, nor will it appear in a database, because there is no searchable database field on a Bloomberg terminal called Storage Property Rental Rates. But you can see it in the annual and quarterly reports – the number of facilities acquired over the past 4 years has been trending lower. More important, the average rent of the acquired properties has declined steadily, from $15.15 per square foot in 2013 to $11.10 during the first half of this year. Essentially, only more marginal properties can be had, which will be less accretive to earnings. They might require greater expense to raise them to the company's operating standards, they might be located in less appealing demographic areas, the company might have to rely more on new construction. But other storage companies are facing the same reality, so competition is increasing. A firm that specializes in providing loans and development capital to self-storage companies now keeps a "Danger List" of cities in which the new supply under development exceeds 10% of the current supply of storage facilities.[3]

Which is all a normal part of a dynamic business sector. Except, Storage Properties is priced for growth, not for business risk. If growth slows or stagnates, if the dividend stops increasing, it is difficult to imagine the shares continuing to trade at 28x cash earnings. What if they were to trade at a 15x multiple, which is more normal for a flattish earnings profile – which would still equate to a pretty strong 6.7% earnings yield? In that event, its 7% position in the ETF will decline by near 50%, which would reduce the value of the entire ETF by 3.5%, which exceeds the annual dividend yield. Just that one stock, just for a valuation correction, not a business disaster, can erase a year's worth of income for the ETF shareholder.

Company Example #2

Top-10 holding Equinix REIT, with a $5.6 billion market cap, is a 5.5% weight in the iShares REIT ETF. It owns 40 data centers around the world, which serve companies that require cloud computing. Cloud computing is the sharing, via the internet, of computer processing power, typically servers or data storage equipment. A company can lease high-end computer time and so does not need to purchase and maintain its own computer center, with all of the capital cost and expensive labor this entails. Some analysts believe the cloud computing market will double in the next 4 to 5 years.

The biggest cloud computing company is Amazon. Some other major players are Microsoft, IBM, Google Cloud Platform, Salesforce.com, Adobe, and Oracle Cloud. But just as corporations have outsourced servers and storage

[3] Jernigan Capital, Inc. (ticker JCAP)

devices to cloud companies, the cloud companies have themselves outsourced their real estate and non-interruptible power supplies to real estate/data center companies like Equinix.

The supposition is that data center providers will grow at a similar high rate because they supply the property and power sources to the cloud companies. Therefore the Equinix dividend yield is less than 2%, even lower than Storage Properties', and the P/E is 19.5x estimates of its 2017 cash earnings. But these earnings are calculated as REITs usually do, by adding back non-cash accounting charges for depreciation and amortization. If the P/E ratio were calculated as for non-real estate companies – according to conventional accounting principles – it would be 133x.

That's a big difference and should be examined. The analyst at the ETF, by the way, if there is one, doesn't examine this; it's not in the job description. Moreover, despite revenue rising by 35% in the most recent quarter, income from continuing operations increased by only 9%. This differential should be examined as well.

Let's start with what is happening with Equinix's customers, the cloud firms. They are constantly lowering their prices to their own customers. For example in June 2015, Amazon Web Services announced a 5% price reduction for its provision of "on-demand" services; in August of this year, it announced that certain data storage prices will be reduced by 47%; there were massive reductions in data transfer prices. It should not be surprising, then, that as customers of the data centers, cloud companies choose very short-term leases, typically around 5 years. This is unusual in real estate. Also, in conventional real estate, location is key, and the property owner has an advantage to the degree that most business tenants covet a desirable location. For data centers, location is relevant only to the degree that electric power is available in scale; a cloud company customer is relatively indifferent as to the location.

Facts & Figures: Eqinix REIT (EQIX)	
Market Cap	$5.6B (5% in ICF)
Assets	40 data centers
2Q Revenue Growth	35%
2Q Income Growth	9%
Yield	2%
P/CF (adjusted for non-cash depreciation expenses)	19.5x
P/CF (unadjusted for non-cash depreciation expenses)	133x

Essentially, the customers of data center companies like Equinix, are lowering their own prices constantly, and therefore require that Equinix lower its prices to them. And these customers have enormous market power. If Equinix chooses not to lower it prices upon demand or lease expiration, Google or Cisco or SalesForce can go to another provider. Certainly, reasonable minds might differ, but you get a sense of how poor Equinix's bargaining position is. You can't find this critical fact-set in a database either.

Accordingly, Equinix is a fast-growing business that is now facing relentless pressure by its customers for price reductions.

The second element is the matter of so-called non-cash depreciation expense. For conventional real estate – we're talking apartment buildings and office buildings and malls – maintenance capital expenditure requirements

are fairly modest, on the order of a few percent a year, and much of that can often be deferred for a number of years. But a data center is much more than a mere warehouse for electronics. A great deal of equipment is necessary to ensure that clients experience no disruption in service, including redundant equipment, air conditioning systems, and more. Much of which has a short life-cycle and must be replaced or upgraded frequently to stay competitive.

In the most recent 6-month period, spending on non-real estate plant, property and equipment was almost 30% higher than depreciation expense. The sum of these expenditures and dividends paid out was about double the depreciation expense. That means that the company's cash flow is insufficient to fund both dividend payments and the equipment expenditures without some form of external financing. Equinix's ability to secure such financing is in large measure dependent upon its high share valuation.

It is unclear in the longer run that these datacenter companies will actually behave like REITs. There is an imponderable technology disruption factor, which requires deeper understanding that can come only with time. The danger is that this is, in reality, a type of unique *deflationary* real estate financed by debt, nothing like real estate as investors understand it. If this is true, it is a very dangerous combination. It is an open proposition, though, since we do not know if that is true. However, if the dividend growth ceases and investors require a 5% yield from this company instead of 2%, then the price will decline by 60%, and that will reduce the value of the entire ETF by 2.2%.

So just two positions in the iShares REIT ETF, not catastrophically re-priced, but just to modest valuations, would reduce the value of the ETF by 5.7%. Recall that the dividend yield is only 2.9%. We're not talking interest rate increase or recession and the effect that might have on the other REITs in the ETF.

The question to ponder is this: this basic level of analysis is not intended to suggest that either of these companies (or others in the ETF) will be disasters or should be sold short (although we believe there are investors who would). The question is whether we have sufficiently characterized just a few elements of this REIT ETF, specifically the concentration risk in general, and the specific business and valuation risk of two holdings that exceed 12% of the fund, such that any of you listening would recommend it to someone seeking from you a defensive, yield oriented investment? Or would you not?

A Side Note About Time and Effort

Now, a pertinent aside. How easy is it to get a recommended asset allocation from a portfolio modelling program or a robo-advisor? How long would it take to get the recommended list of 10 or 20 different ETFs and get invested? I've tried it; about 2 minutes – if that. Just to review two holdings in the REIT ETF, I'm already more than halfway through our customary allotted time for this call. And we've been paying attention only to some of the most obvious essentials of each company: the nature of its business and how it makes money, its position in that sector vis a vis competitors and customers, if it's a good business that has substantive additional potential or, in the alternative, whether it is facing serious risks. If facing risks, what is the basic nature of those risks and how might the company be impacted? And, of course, whether the shares are expensive or cheap.

If either of those thumbnail company reviews was even a touch illuminating, it's an illustration of how security selection must be done – that it can't really be as easy as screening for some statistical shorthand that only represents the past, for the very same screens and statistics that millions of other investors can at the touch of the very same Enter button that you push. How could it possibly be?

A More Systematic Approach

For the iShares Select Dividend ETF, to be more time efficient, rather than repeat the individual company examples, we'll just look at its structural suitability as a lower-risk investment for those desirous of income. Recall that the dividend yield is 3.17%. As well, the dividend is 46% higher than five years ago, which means it has risen by almost 8% per year. Pretty nice. What's to complain about?

First, basic principles. The motive for buying a portfolio of high-quality, relatively high dividend paying companies – which is essentially how iShares defines DVY – is that the dividends can increase over time. And that is usually a product of business growth. So let's see what the growth of the DVY companies has been – this really isn't so-called "deep dive" analysis; you'll see.

iShares Select Dividend ETF (DVY)		
LMT	LOCKHEED MARTIN CORP	3.9
CME	CME GROUP INC CLASS A	3.2
CVX	CHEVRON CORP	2.6
OKE	ONEOK INC	2.5
PM	PHILIP MORRIS INTERNATIONAL	2.2
NEE	NEXTERA ENERGY INC	2.1
CAT	CATERPILLAR INC	2.0
MCD	MCDONALDS CORP	1.9
KMB	KIMBERLY CLARK CORP	1.9
	Total Top 10	**24.2**

Here are the top ten holdings in DVY; they account for 24% of its market value. Solid blue chips: Lockheed Martin, Philip Morris International, Kimberly Clark, Caterpillar Tractor and so forth. What would you say the average buyer of DVY would think the revenue growth rate for the top 10 holdings has been over the last 5 years? I've had a little experience asking questions like this, though I haven't asked this particular one.

The answer is *down* 14%. It's a bit of a trick question, though not intentionally, because Chevron is number 4 and obviously oil prices are a lot lower today than a year or two ago. So let's exclude Chevron. The answer, thankfully, is that the sales are up. But only by 3.9% over five years; which is less than 0.8% per year.

Facts and Figures	**Current**	**5-Yr Prior**
Dividend Yield	3.2%	2.2%
Dividend Payout	99%	44%
5-Yr Change in Dividend	+46%	
5 Yr-Change in Revenue (Top 10)	-14%	
5 Yr-Change in Revenue (Excl. Chevron)	+3.9%	
Valuation	**09/2016**	**2007-2015**
Price/Book Value	2.44x	1.93x
P/E Ratio	19.7x	13.8x

One might fairly conclude that these companies are mature and can't expand in any meaningful way. That's ok, except if so, perhaps one shouldn't expect much in the way of future dividend increases. Moreover, if interest rates rise or there is a recession that affects demand for their products, it is also fair to conclude that they don't have sufficient optionality or earnings vitality to overcome the impact on their operations or share valuations.

But hold on, we know that these are dividend growers, so how did they grow their dividends? Ok, then let's look at that. This isn't a deep dive either. In 2010, five years ago, these companies, on average, paid out 44% of their earnings in the form of dividends (in 2006, the payout ratio was 38%). Those are historically normal figures. The idea is that the shareholder receives a dividend from a portion, roughly 40%, of earnings, and the companies can reinvest the balance in their businesses. If Caterpillar Tractor reinvests these residual earnings – now part of the company's capital – to expand a production facility, it can increase sales, earnings and dividends.

In 2015, though, these companies paid out 99% of their earnings as dividends, not 40%. That's pretty extreme, but it does include the Chevron payout ratio, which is 174%, or 74% more than it earned in 2015. Maybe that's temporary, so we'll eliminate Chevron from the tally. Then the payout ratio is 91% of earnings. There's also ONEOK, the natural gas pipeline company, with a 209% payout ratio. I suppose we could back that out, just for generosity's sake. That gets the payout ratio for the remaining companies down to 76%. The reality remains. And it suggests two things.

One, since revenues didn't expand, all that happened was the DVY companies just paid out more and more of their earnings each year. They did that because they saw that shareholders responded very positively to that, by buying the shares (through ETFs that focus on this factor), pushing the share price up. We already saw how popular DVY is. But whether the payout is 76% or 99%, what's drawing to a close is the ability to continue to raise dividends more rapidly than earnings – the rubber band has been stretched pretty far. They can find a bit more room, but there is a limit.

Two, is earnings: if substantially all of the income is paid out, so the companies can't reinvest in the business, where will the revenue growth come from? In that regard, the underlying profitability of these companies is weaker than is obvious. The most basic measure of profitability, their return on invested capital, or return on equity has contracted. Ten years ago, in 2007, the DVY companies had an ROE of 17.2%; for the 8 years from 2007 to 2013, the average ROE was 15.6%, and that included the Financial Crisis years. But in 2014, the ROE was 13.2%, and in 2015 it was down to 11.8%. That's an ROE contraction of 15% to 24%.

Despite this reduced profitability and low or negative sales progression, the DVY shares have done little but go up in the past five years: up 62%, which is 10% a year. The price/book value ratio, which simply measures how much one pays for this equity that is earning less than it used to, has climbed from an average 1.93x for the 9 years to September 2015, to 2.44x as of last month. Investors are paying 29% more for capital that is earning 15% to 24% less than it used to. Or in terms that are more familiar, the average P/E ratio of the DVY companies has risen from and average 13.8x in the 9 years from September 2007 to September 2015 to 19.7x for the 2016 period.

If there won't be dividend growth in the future – which is clearly a thought that has not occurred to holders of DVY – should one accept only a 3.17% starting yield? And if any of you individually would, because it's sufficient for you personally, will other investors? This could be a very disappointing investment.

Et tu, Utilities?

IDU is comprised 59% of electric utilities, 30% of multi-utilities, which includes gas and electric, and 2.5% of independent electric power producers, so that's over 90% of it. The top 10 holdings represent over 52% of the fund, so it has the same top heaviness problem – not diversified as to company specific risk. In the interest of time, we won't analyze the risks of individual holdings as we did with the REIT ETF – and there are significant risks. We won't even address the multiple structural risks, as we did with the Dividend ETF; we'll just talk about one.

According to the Edison Electric Institute, the total installed generating capacity in the U.S. decreased by 0.1% from 2014. This might be the first time that electric generating capacity in the U.S. has contracted since the days of Thomas Edison. If total capacity remains flat, much less declines further, this could be a very serious problem for the net profits and dividends that utilities can generate.

The investment return of utilities over the decades has essentially been the sum of the dividend yield and very modest growth consistent with a gradually expanding population, say 3% or so. But power plants do, in fact, depreciate and age out, and are eventually decommissioned. When that happens, if there is no expansion, then there is less plant and equipment upon which the utility is permitted to earn a return. Earnings and dividends could actually decline.

Some of the decreased demand is due to improving conservation efforts and technological efficiencies, such as low-wattage lightbulbs. But the real swing factor may be the once perennial joke: solar power.

In the 2nd quarter of 2016, the amount of solar capacity newly installed in the U.S., in megawatts, increased by 43%. Not to overstate the case, solar energy still represents only several percent of total electricity generation. Nevertheless it accounted for 26% of all new electric generating capacity brought online in the first half of 2016. That's a big deal. One can see the significant threat that this seemingly modest incursion by the solar power industry represents.

	All Energy Sources	Capacity Excl. Solar and Wind	Yr/Yr Change	Solar	Yr/Yr Change	Wind	Yr/Yr Change
2004	963	956.1		0.4		6.5	
2005	978	968.9	1.3%	0.4	3.3%	8.7	34.9%
2006	986	974.3	0.6%	0.4	0.0%	11.3	30.1%
2007	995	978.0	0.4%	0.5	22.1%	16.5	45.8%
2008	1,010	984.8	0.7%	0.5	6.8%	24.7	49.3%
2009	1,025	990.1	0.5%	0.6	15.5%	34.3	39.1%
2010	1,039	999.0	0.9%	0.9	39.9%	39.1	14.1%
2011	1,051	1,003.8	0.5%	1.5	76.0%	45.7	16.7%
2012	1,063	1,000.8	-0.3%	3.2	108.0%	59.1	29.3%
2013	1,060	993.4	-0.7%	6.6	108.9%	60.0	1.5%
2014	1,068	993.4	0.0%	10.3	55.9%	64.2	7.1%

Source: https://www.eia.gov/electricity/annual/html/epa_01_02.htm

Rooftop solar power generation has been ignored by utility analysts because the market share is still so low. But now there is now a related technological development: one can store solar-generated power in either home batteries or accumulators, or with distributed storage providers, companies like Solar Grid Storage. A home generator on idle that is wired to a lithium ion battery could use very little fuel, yet power a house for a very long time if attached to solar panels, even in extended overcast weather. The average price for an installed solar power system has declined by 61% since 2010; the price of lithium ion batteries has declined by 50%.

This is a much more significant problem: the developing threat that the customer will entirely leave the grid. In fact, if you simply read the annual report of an electric utility company, you'll see that they are fully aware of the risk – it's not a secret to them.

Within the historical timeframe examined by the academicians, utilities shares have been primarily an instrument that has benefited from lower interest rates; yields have fallen and share prices have increased. Now, though, there is no meaningful possibility of increasing revenue growth, but there is a meaningful possibility of revenue and profit decline. Even a very small degree of revenue shrinkage could be devastating to earnings, since these companies have large fixed costs and very little variable cost. The utility industry is in great danger of this. And the P/E ratio of IDU is 19.9x. Therefore, the utilities can no longer be viewed as stable, low-beta, high-quality, yield-bearing investments. At some point, the actual dividends are at risk.

And Finally, Low-Volatility ETFs

The PowerShares S&P Small Cap Low Volatility ETF ("XSLV") contains the 120 least volatile stocks from the 600-stock S&P Small Cap Index, and it is arranged so that the least volatile stocks have the largest weightings. The dividend yield, at 1.99%, exceeds the 10-Year Treasury. The ETF has $640 million of AUM, and the average market cap of the holdings is $1.6 billion.

The annualized return during the past three years is 12.1%; it is a relatively new ETF, so doesn't have a 5-year record. For a variety of reasons, small-cap stocks should be expected to grow more rapidly over time than large-cap companies. Also, the ETF really is less volatile: it is 25% less volatile than its small-cap benchmark index (a beta of 0.75) and it is 21% less volatile than the S&P 500 (a 0.79 beta).

This ETF back-tests well. It should be emphasized that it is simply not worth the expense and effort for an ETF organizer to try to market a new fund that does not back-test well. It requires, specifically, a low beta combined with good performance, for a high risk-adjusted return statistic.

This discussion will be even shorter than the Utility ETF discussion, because we will only point out one factor that the MBA applicant might have missed in looking at these statistics.

In fact, I won't even tell you what the critical risk factor is in this low-risk-labelled ETF. I'll present three tables to you, and you will reveal it on your own.

Sector Weighting (%, as of 6/30/16)	XSLV	S&P SmallCap 600 Index	S&P 500 Index
Energy	0.00	2.92	7.40
Materials	3.88	5.27	2.82
Industrials	15.33	18.00	10.19
Consumer Discretionary	6.57	13.71	12.28
Consumer Staples	2.72	2.91	10.56
Health Care	2.34	12.68	14.69
Financials	53.05	23.04	15.75
Information Technology	5.50	15.36	19.77
Telecommunication Ser-	0.81	1.28	2.91
Utilities	9.81	4.82	3.63

Source: ETF provider, Bloomberg

We've deliberately used the June 30th figures, because they will be a collector's item. In September 2016, for the first time since 1999, S&P and MSCI have added a new sector classification. This is for real estate companies, which until now were included within the Financials sector; they are now being separated. One may draw any number of conclusions as to the reason(s).

Perhaps you noticed that the weighting of the Financial Sector in the S&P 500 is 15.75%. It doesn't stand out, though, so you would not have noticed it first. You would first have noticed that the financials have a 53.05% weight – yes, indeed – in the Low Volatility ETF. And that the benchmark S&P Small Cap 600 Index has a 23.04% weighting in financials. The latter figure is perhaps understandable. Truly national- and international-class financial companies have undergone tremendous consolidation in recent decades, and more so in the jaws of the Financial Crisis. There aren't that many of them. But there are many, many smaller and local companies: local banks and savings and loans, specialty insurance companies, specialty finance companies and the like.

But, more than 50% in financials? Do you think that if you were a financial advisor of a purportedly low-risk strategy you would be permitted to have a 50% weight in one sector, and a debt-leveraged one at that? I can assure you, if it were me, they'd be on me like a flash. I'd have to correct the matter immediately AND explain myself. But here, it's ok; it's an index. And an index can never underperform – by definition, since it's the index.

The explanation for the overweight is straightforward: the financials have exhibited quite low volatility in recent years, so they fall into the index inclusion rule-set. But is this an intrinsic property of banks and insurance and finance companies – or of any sector? In the case of financials, perhaps it's simply that the Federal Reserve has maintained low and steady interest rates for well over a half-decade. Would anyone reasonably assert that the volatility of the financial sector will not increase, and probably dramatically, if rates rise? In the case of any sector, volatility or its absence is simply an effect of an environment in which it operates at a given time.

As to this ETF, even if the organizer listens to a recording of this too-long review and for some reason agrees with me, it still cannot reorient this portfolio pre-emptively – that would be active management. The ETF can only be rebalanced once the beta rises, which will be a touch late.

Let's Not Be Harsh

By the way, we would not be harsh with our MBA job applicant; he or she will probably get the job, though I daresay our collective judgment this afternoon would be that they failed the test. But that's what they were taught. And this is a learning experience, and we teach a different way of understanding investments. And to be fair, the proposed portfolio was little different than an asset allocation model or robo advisor might have suggested. The use of back-testing and ex post facto risk statistics have obvious limitations. Nevertheless, they are almost universally used now. But at least they do illustrate the efficient *marketing* hypothesis in action.

To soften the evaluation of the MBA's proposed low-risk equity portfolio, I might re-tell a story that our Chief Investment Officer, Murray Stahl tells:

> There is a story about an old monastery built on a mountain in Italy. In order that the monks could experience as much solitude as possible, the only way to ascend to the monastery was to climb a rope ladder. A scholar, fascinated by monastic sects, once visited the monastery and had no choice but to ascend the ladder. While climbing up, the scholar noticed that the ladder was frayed and worn. Upon reaching the monastery, the scholar asked the most senior monk how often the ladder is changed. After some reflection, the monk had the following response: "Whenever it breaks."

An Important Message

I'm sorry, on the one hand, that I used so much time on this faux MBA exercise. On the other hand, it's important that people who are not speculating, who have serious income needs and simply want to be reasonably safe, understand if they are inadvertently at risk once more. There is no proper labelling, no truth in advertising, no true risk identifiers for ETFs – how can the average investor possibly be expected to know these things?
So rather than squeeze in a couple of minutes discussing how well the discounted bonds we bought a few months ago have done, or why we added to the shipping company A P Moller-Maersk, I'm going to suggest something different, just for today, and it will take less time.

Income is ultimately the name of the game – that is our belief. At the end of the day, what is the purpose of all this stock buying, all of this endless fascination with the stock market? It should not become an abstraction. A major purpose is to buy income. One day, retirement is upon us and we wish to have sufficient cash flow.

In that context, appreciation is not an end in itself, but is linked to the development of that income target. As risk capital appreciates, some of that appreciation should be used to purchase an income-generating security, to add to your long-term income stream. And in our opinion, development of that income stream should start early, not late.

Despite the low yields and high risk being offered by the ostensibly low-risk ETFs we reviewed here, there are in fact higher-yield, lower-risk individual securities available, if one can engage in security by security analysis. These are the securities that haven't been re-priced upwards by association with ETFs; in fact, many have been re-priced downwards because they have been rejected by the ETFs. They are not all available, all of the time; they appear episodically, so it is a process. And in some cases, if we can't buy yield, we sometimes find tools to manufacture it. Where there's a will there's a way.

So this is an invitation, to any of you participating in this call, to give us a ring or send us a note, if you wish to have a better understanding of the alternative approaches to securing income or of the types of securities we're talking about. If we get a sufficient show of interest, the idea is to arrange a private symposium of sorts or get-together, and perhaps we'll query you in advance as to your specific interests or questions. If it's to be at our offices there might even be coffee and such. So let us know.

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