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The Worst Year Ever for Hedge Funds

By Joe Peta

"Yes, I am a pirate, two-hundred years too late. The cannons don't thunder, there's nothing to plunder. I'm an over-40 victim of fate. Arriving too late, arriving too late."

- Jimmy Buffett, A Pirate Looks at 40

Warren Buffett (reportedly a distant cousin of Jimmy Buffett) once said that his ascension into the ranks of the world's richest people couldn't have occurred without being born in the United States during the twentieth century. His ability to allocate capital, a talent he possesses arguably in excess of any of his peers, could not have been exercised without living in a society which values that skill. As he says, "if I'd been born into a tribe of hunters, this talent of mine would be pretty worthless. (Instead of being rich,) I'd probably end up as some wild animal's dinner."



It wouldn't do much good for a skilled sword-fisherman to live in Iowa, a Sherpa to reside in Bermuda, nor to be an elite typewriter repairman anywhere. Those, of course, are extreme examples of skills being comically mismatched with their environment or entirely obsolete, but what about the more subtle case of one's skill-set diminishing in value? Running backs used to be valued on a par with quarterbacks in the NFL. But with the advent of the West Coast offense which essentially turned the short passing game into long handoffs to wide receivers, as well as rule changes inhibiting both pass rushers and pass defenders, the running back has nowhere near the influence on a team's offense that he did one or two generations ago. He's not quite obsolete – all NFL teams still field running backs – but in the NFL today running backs makes less on average than defensive tackles. He's virtually a commodity.

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On the surface, it wouldn't appear that way. After all, it looks like everyone should be happy in 2014. The stock market (as measured by the total return of the SPX) rose for the sixth year in a row, it hit more daily all-time highs (53) than any year on record, and with a near -14% total return on top of last year's 32% return, the annualized 10-year total return of the S&P 500 is nearly 8% -- the threshold of self-sufficiency for many pension plans. That's a remarkable achievement considering it includes a 37% drop in calendar year 2008 and a far worse peak-to-trough drop through the multi-year financial crisis.

Yet, hedge funds find themselves under fire from a number of different directions.

« From the perspective of value-of-skills-in-the-marketplace, 2014 was arguably the worst year ever to manage a hedge fund manager or to be invested in one. »

Portfolio managers have skills too, and despite the fact that it's rarely looked at this way, those skills, especially for those who work at hedge funds, vary in value from year-to-year. During the final quarter of 2014 there was lots of chatter in the financial press about hedge funds, their fees, and split opinions as to whether CALPERS had made a wise choice to excise alternative investments from its portfolio or whether they were, in the words of Anthony Scaramucci writing in *Barron's* ("In Defense of Hedge Funds"), exiting the space "at exactly the wrong time." Yet a lot of those discussions miss a salient fact: From the perspective of value-of-

Even in the era of (virtually) no-cost, passive investing which casts doubt upon the collective value of long-only mutual fund complexes, there is still academic support for the value of hedge funds in an investment portfolio. An examination of the risk-adjusted returns possible with hedge funds and the location of portfolios on the "efficient frontier" with-and-without hedge funds is beyond the scope of this piece, but we can examine the tools a hedge fund's portfolio manager can employ that a passive investor cannot. (For our purposes, we will limit this discussion to the world of equity investing.) It is these tools which provide the asset class

of hedge funds with the theoretical value justifying its existence.

There has always been a bit of aura around hedge funds but the reality is quite simple and shouldn't be shrouded in mystery. Frankly, although we can create sub-categories of each, there are really only three dials that a hedge fund manager can access to outperform a passive ETF indexed to a benchmark.

tors for these skills, in the form of both a fixed management fee and a variable incentive fee. The fees charged attract a lot of scrutiny but again, it misses a larger point: What's the value of each skill?

Fees may be too high, structured inefficiently, etc. but we're not going to address that here. We'll simply examine if the intrinsic value of those three skills – of which a hedge fund manager must possess at least one – is rising or falling in the

« Exposure Management. Security Selection. Position Sizing. That's it. Those are the three areas in which a portfolio manager can possess skills that may provide value over a passively-run portfolio. »

1) The passive vehicle is 100% invested at all times. Therefore, a portfolio manager can create value by adjusting net exposure to the market on a tactical basis.

2) A portfolio manager does not have to own every security in a passive vehicle and, in fact, can invest in companies that are not even in the benchmark.

3) The weightings in an ETF are fixed, and even in the case of cap-weighted indices, if viewed in slices, something close to evenly-weighted. A hedge fund, however, can vary the size of its positions to create value even if all of its holdings are included in the passive fund.

Exposure Management. Security Selection. Position Sizing. That's it. Those are the three areas in which a portfolio manager can possess skills that may provide value over a passively-run portfolio. Without expertise in at least one of those three areas, it's impossible for a hedge fund to justify its existence – and that's before fees are even considered. Each of those skills can be activated either in isolation or in tandem with one or both of the other skills. Hedge funds, of course, charge their inves-

2014 market environment. For hedge funds it's a sobering study; all three skills, like an Earl Campbell-style running back in today's NFL, had historically low value over the last year.

Let's take a look at each of these skills separately and examine their value within the context of 2014's market environment.

Exposure Management

As noted above, one way a portfolio manager can exploit the rigid, fully-invested-at-all-times setting of an ETF is to tactically shift net exposure on a day-to-day basis. In practice, of course, nearly all hedge funds maintain net exposure at less than 100%. In such a case the measurement of a hedge fund's value, or in investing parlance, "its alpha" is calculated on a risk-adjusted basis. Capturing 80% of a benchmark's advance with only 50% net exposure to the market is an alpha-creating result. All portfolio managers within a hedge fund structure can add value, or capture alpha, via shifts in net exposure. (Of course, they can also detract value as well.) Let's take a couple of examples.

Example 1, Net Exposure Skill Isolated from all Other Skills:

If Exposure Management were a PM's sole skill she could express that skill by being fully invested in a benchmark ETF (thereby neutralizing any differences in Security Selection and Position Sizing) on some days and less than fully invested on others. In this very simplified example, let's assume we have a PM who is fully invested for the first 11 months of the year, but then reduces exposure to zero in December. In this case, whether she created value for her investors is entirely dependent on the movement of the benchmark in December. If it falls, she has created value and if it rises, she has detracted value.

Example 2

Rather than make a monthly bet, as in Example 1, our PM shifts her exposure daily to either zero or 100% via positioning at the prior day's close. (This is feasible to do as she is still neutralizing the other skills and solely trading a broad-market ETF.) However, for this example let's make another assumption. It's unrealistic but as you'll see it will be illustrative once we address value of this skill. Let's say that the US equity market either advances or declines 1% a day, with no other result possible. In such an environment, each day that our PM sets her exposure she's either going to match the return of the market (if she's 100% invested) or she will add or detract 1% of value for her investors. (She creates value if she's 0% invested and the market declines 1% and she detracts on days it advances and she's 0% invested.)

As in Example 1, the amount of alpha that the PM generates is easy to calculate. If the PM been fully invested on 65% of up days and out of the market on 75% of down days, it's fairly easy to determine the value of that manager's Exposure Management skill. She's detracted 100 basis points of alpha on 35% of up days and added 100 basis points of alpha on 75% of down days. It's just a matter of counting the up and down days to determine her

collective alpha-generation.

However, it's also easy to see that the intrinsic value of that skill is entirely dependent on realized volatility. In Example 2, the alpha calculation changes based on the size of the daily moves in the market. If we change our assumptions to +/- .50% a day instead of 1%, the alpha-generation or -destruction halves. In Example 1, the value that the PM can add (or detract) is entirely based on how much the market moves in the month of December. If the market moves 2%, there is a lot of value in a PM who gets the exposure call right. But if the market moves 20 basis points, there is much less at stake. Like a farmer hiring a meteorologist in San Diego, it's really not a big deal if the weatherman is a bad forecaster. The range of outcomes is minimal, so no farmer is going to waste excessive resources hiring a meteorologist. It's akin to buying sand at the beach. No matter how great the meteorologist, he's going to have a hard time finding people who value his skill in San Diego.

It's therefore clear that the value of Exposure Management is entirely dependent on realized volatility. Below is a table of the average daily change in the S&P 500 ("SPX") over the last 11 years:

S&P 500 (SPX) Average Daily Change	
Year	Return (bps)
2004	54
2005	52
2006	47
2007	72
2008	174
2009	124
2010	80
2011	104
2012	59
2013	54
10-yr Average	82
2014	53

You can see for yourself that the value of effective Exposure Management declined for the third straight year to a level similar to the 2004-2006 time frame. If tactically shifting net exposure is your calling card as a PM, only the 2005-2006 era was a worse period in terms of your skill having value. (This conclusion holds if we go back to 1996, essentially covering the life of the modern hedge fund industry; there are very few hedge funds today that had meaningful assets, or even existed nearly 20 years ago.)

Security Selection

While funds may attempt to tactically shift their exposure to the market, it's rarely something they pitch to investors in meetings. Sit in on virtually any meeting between a PM and potential investors in her fund and you are certain to hear the PM extol the firm's ability to pick stocks. They "kick

the tires" and "know our companies" without peer, etc. It may be repetitive to the point of cliché, but it's also imperative. Potential investors can own a basket of market-representative stocks for nearly zero cost; a hedge fund manager must convince them that the firm's PM's and analysts have a repeatable process that regularly identifies the best stocks from that market-basket while avoiding, or shorting, the worst of the lot.

This is the most obvious way PM's create value, or alpha and, like other skills, it can be isolated.

Example 1, Security Selection Isolated from all Other Skills:

If Security Selection were a PM's sole skill she could express that skill by running a level-exposure fund at all times (a strategy which also includes fully-invested, long-only mutual funds.) Additionally, the fund initially makes all investments the same size to eliminate sizing decisions. For our example, we'll again create an unrealistically simple portfolio – our PM runs a zero-exposure, two-security portfolio, with each position 50% of AUM.

Obviously, this is an unrealistic example so if you prefer, think of a hedge fund with ten different analysts/PM's and a master fund that has the best long and short idea of each of them. If each position were 5% of AUM you'd have a single portfolio, consisting of ten mini portfolios much like our oversimplified example.

In this example, it's easy to see that the fund (or each analyst's mini-portfolio) will make or lose money based on one, and only one criterion: Did the long position outperform the short position? In our two-security portfolio it doesn't matter if the long rose in price or if the short fell in price – although it would be ideal if both did exactly that. However, from a value- or alpha-creation standpoint, all that matters is if the long outperforms the short even if both fall or both rise.

Just like our Exposure Management example, we've made it very easy to determine if Security Selection paid off. It's also clear that batting average, or the percent of securities that made money can be deceiving. A 100% batting average means the long made money and the short lost and that guarantees a profit, and a 0% batting average guarantees a loss, but there are many ways that a 50% batting average, with one winner and one loser, can provide a profit in excess of the 100% batting average portfolio or conversely lose a lot more than the 0% batting average portfolio. Further, the value of the ability to identify winners and losers each year varies based on how much the winners exceed their benchmark and how much the losers fall short. If all securities exhibit returns that hug the benchmark, there's not much value to be generated pairing winners with losers. If, on the other hand, there is wide variation, if the bell curve of single stock distributions is flat and wide then there is a lot at stake and in the words of Bruce Springsteen in *Atlantic City*, "it's just winners and losers and don't get caught on the wrong side of that line."

Here is a table of the spread between the return of the average member of the "SPX" above the median return and the average stock below the median return, over the last 11 years:

S&P 500 (SPX) Historical Stock Performance Spreads	
Year	Return (bps)
2004	38.99
2005	37.67
2006	33.74
2007	51.98
2008	38.8
2009	70.75
2010	39.36
2011	38.77
2012	34.26
2013	44.15
10-yr Average	42.85
2014	33.58

This factor, which measures the spread of winners and losers is referred to as "disbursement" and just like realized volatility it varies greatly from year to year. In other words, look separately at each PM/analyst making a 5% pairs trade and the ability to create alpha is dependent on how much winners outperform losers over the course of a year. To show the varying value of pairing winners with losers, we've calculated the spread, in percentage return terms, that a pairs trade featuring the average outperforming stock and the average underperforming stock in the S&P 500 ("SPX") would have for the last 11 years. To make it clear, let's take a look at one year in detail before looking at the historical data.

2004 S&P 500 (SPX) Stock Performance	Return (%)
Median Return of the SPX (250 above; 250 below):	14.80
Average return of each stock above the Median:	36.63
Average return of each stock below the Median:	-2.36
Spread between Average Out-/Under-performer	38.99 (appears in table, above)

Just like the Exposure Management skill, the value of optimal Security Selection is way down and in this case, hit a multi-year low in 2014. Of course, in a single-stock portfolio situation as illustrated above, it's still possible to create a tremendous amount of alpha. Even in a low dispersion year overall, Southwest Air (\$LUV) more than doubled while Transocean (\$RIG) saw its price more than cut in half – a pairs trade which is actually logical if one forecast a steep drop in the price of oil. But an examination of the spread between the average out- and under-performer is a very good indication of how much fruit was available for picking from the alpha tree. Also, a multi-security portfolio will, by definition, start looking more like the market overall in terms of the performance of winners and losers. Once a hedge fund has dozens of positions on each side of the ledger, it becomes just as likely to have a two-winner, alpha-generating trade of long Blackrock (\$BLK) and short Procter & Gamble (\$PG) capturing a 30 basis point spread as the aforementioned \$LUV/\$RIG trade capturing 150%+.

In 2014, the conclusion is clear and costly for long/short strategies; the ability to pick winners and losers beforehand, the skill of relative-value pairing which is the very basis for the theoretical value of superior risk-adjusted returns in a long/short hedge fund, has almost certainly never been worth less during the existence of virtually every hedge fund.

Still, a PM might protest, despite the low dispersion, if my largest positions were my biggest winners, won't that create enough alpha to overcome, or at least mitigate, the lack of dispersion? This leads to an examination of the last available tool a PM has at her disposal — Can Position Sizing skill make up for the lack of opportunities Exposure Management and Security Selection provided in 2014?

Position Sizing

At Novus we've examined the performance of

many hundreds of hedge funds and we've found that, by far, the most important skill to possess is the ability to size positions effectively. That's because unlike Exposure Management, and to a lesser degree Security Selection, the ability to size positions efficiently is the most persistent and consistent alpha-generating skill that a portfolio manager can possess. In short, it's the most repeatable skill.

Effective position sizing means that a fund's largest positions had the highest return on capital. When 5% or 7% long positions outperform all of the other positions in the fund, it can paper over a lot of other deficiencies in the area of security selection. For example, a sub-standard, or under .500 batting average can be overcome if the biggest positions are the winners. There are \$20 billion dollar hedge funds that owe the vast majority of their cumulative alpha creation to the market-beating compound returns of a handful of their largest positions.

Before we go through an example it's important to note a subtle difference between the value of Security Selection and the value of Position Sizing. On the surface it appears that both are dependent on dispersion and that's true – but it's a different kind of dispersion. For instance, if the median return of the 500 members of the SPX is 33% and the average outperformer is up 80% while the average underperformer is up only 9%, that 71% difference between picking a winner and picking a loser makes effective security selection incredibly valuable. (This is, in fact, the exact environment that existed in 2009, the greatest year ever for PM's with superior security selection acumen to ply their skills.) However, if every outperformer was up 80% and every underperformer was up only 13%, the ability to size positions effectively would have no value. Identifying winners and losers would be important but sizing them would make no difference relative to other winners and losers.

Position Sizing, therefore, is valuable in an envi-

ronment where there is wide disbursement within the winners and the losers, as opposed to between the winners and the losers.

To determine the favorability of the environment for effective Position Sizing in any single year, we'll calculate the difference between the return of the average outperforming stock in the population of outperformers overall vs. the underperformers from that group. (The return of the outperforming outperformers less the return of the underperforming outperformers, if you will.) The same calculation will be applied to underperformers. As with Security Selection, we'll show one year's calculation in detail prior to displaying the entire table.

2004 S&P 500 (SPX) Outperforming vs. Underperforming		Return (%)
Average return of all outperforming SPX stocks:		36.62
Average return of top half of outperformers:		51.65
Average return of bottom half of outperformers:		21.71
Spread		29.94
Average return of all under-performing SPX stocks:		-2.36
Average return of top half of under-performers:		8.48
Average return of bottom half of outperformers:		-13.12
Spread		21.59

Below is a table, covering the last 11 years, of the spread between the top- and bottom-half of outperforming members of the S&P 500 ("SPX") and the top- and bottom-half of underperforming members:

Historical Spread of S&P 500 (SPX) Top vs. Bottom Performers		
Year	Top Performers (%)	Bottom Performers (%)
2004	29.94	21.59
2005	30.74	19.32
2006	24.17	20.04
2007	38.54	28.35
2008	22.99	22.09
2009	69.44	26.02
2010	29.14	20.02
2011	22.30	23.61
2012	28.00	18.78
2013	33.72	23.02
10-yr Average	32.90	22.28
2014	21.61	19.92

Once again we see that it just didn't pay to be good at something if you were a portfolio manager in 2014. On both the short and the long side – especially the long side – the environment didn't reward those with a history of sizing positions well. Again, historical lows have been hit.

This is a sobering reality for hedge funds and their investors. There were historically low rewards available for those managers with superior skills. In 2014, a PM could have been just as good at timing the market, or picking winners and losers, or sizing those positions effectively as she'd always been but the returns, from an alpha-generation standpoint won't show it. Worse, investors may conclude that the PM lost ability when that's not necessarily the case.

No one should blame the fisherman for a sub-standard catch if there are no fish in the water. But that's what's going to happen if no one bothers examining the ocean to determine the population of fish available. Then again, if that exercise is performed, once it's determined that there are a limited amount of fish in the water, it'd be foolish to pay a lot of money to hire the fisherman.

The theme should be clear by now. It doesn't matter the skill; for the purposes of creating alpha, 2014 was a lousy year and if this were the case every year, the theoretical value of hedge funds would diminish, and once fees are considered, possibly disappear. The risk-adjusted value proposition of including hedge funds in a portfolio is dependent on a fund's ability to extract value from the tools that aren't available to an investor in a passive vehicle. Those tools – Exposure Management, Security Selection, and Position Sizing – need an environment of volatility and dispersion to have any value, or at least value sufficient to justify elevated management and incentive fees.

The modern hedge fund industry has only been in existence for roughly two decades. It's not at all unusual to examine the alternative investment sleeve of a multi-billion dollar endowment or pension fund and find that its roster of four- to five-dozen hedge funds doesn't include any funds possessing a track record in excess of 20 years. Using that twenty-year time frame, it's reasonable to conclude that there has never been a worse environment for a hedge fund manager to create value

than existed in 2014.

The question for hedge funds and their potential investors becomes, what does the future hold? Are we operating in a new environment which blunts the tools hedge funds can access to create value or was 2014 a rare combination of unfavorable environments?

The good news for hedge funds and investors that stick with them going forward is that the environment for every single skill that we've discussed – all of which reside in the historic low range in terms of value – exhibit strong mean-reverting tendencies. There are a number of ways to measure forecasting error but consider this: In the case of every table of calculations presented in earlier in this article, when predicting any single year's figure, you'd be better off taking the historic mean than the prior year's result.

That's good news for hedge fund managers because historically, the average environment of volatility and dispersion has been receptive to meaningful alpha-creation. With that in mind, it appears for two different reasons – both rooted in recency bias – that now very well might be, in the words of Anthony Scaramucci (as cited previously) “exactly the wrong time” to flee hedge funds.

1) Two straight years of meaningful, minimal-drawdown, stock-market rallies has left many investors lamenting the absolute returns of their hedge fund investments. In a vacuum, that's a dangerous way to think because a) the investors (let alone commentators) probably aren't risk-adjusting the hedge fund returns when comparing them to the absolute return of the market and b) hedge funds provide a valuable role in stabilizing portfolio returns in a falling market. As 2014 has come to an end, it only feels like we'll never experience one of those again.

2) Sophisticated investors who judge their

hedge fund managers on alpha-creation almost certainly – as shown in this study – won't see as much of it this year, especially if they are invested with many managers as is common in an endowment-style portfolio. That doesn't necessarily mean the hedge fund has seen the skills of its PM/analysts diminish. It's because, no matter how great the manager, the investing environment in 2014 limited the quantity of alpha available for capture.

Not only are those factors out of the control of the manager, but relying on them as the “new normal” would appear to be a dangerous conclusion. Unlike the pirate in Jimmy Buffet's ode to aging which opened this piece, skilled portfolio managers needn't look for a new career. They can simply lament a perfect storm of poor factors in 2014 that created a temporary environment in which their skills had limited value.

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