# Like Tiger, Like Cub

The progeny of Julian Robertson leave tracks in the master's footprints

*By Stan Altshuller, Joe Peta and Christopher Jordan*

In the National Football League, it's known as the "coaching tree." By tracing the lineage of a team's head coach to the different coaches he served under as an assistant, the head coach is said to belong to the coaching tree of a single patriarch. This discussion gained a following in NFL circles during the late 1990s, when a number of Bill Walsh's assistants, having employed the same type of offensive system that Walsh pioneered, enjoyed considerable success in their own right. Walsh, dubbed "The Genius" by observers in and out of the NFL for his tactics and his analytical approach to the game, is lauded by many as one of the most innovative offensive coaches ever, and the unquestioned architect of the so-called "West Coast offense." If he's not the greatest coach of all time, he's certainly in the photo. Walsh won three Super Bowls, and his assistants led five other teams to the Super Bowl, winning three more. The six championships won by Walsh and his direct coaching decedents since 1982, when Walsh won his first, only tell part of the story. Assistants of his assistants have coached in virtually every city with an NFL franchise, collecting another five Lombardi trophies in the process.

Fruitful succession "trees" in the NFL don't always occur in other creative enterprises. It's rare for bands to spawn successor bands. Television may have coined the term "spin-off," but the practice's legacy is spotty at best. For every "Laverne and Shirley" or "The Jeffersons," there are dozens of (thankfully) long-forgotten spin-offs from fabulously successful shows. (We present, for your consideration, "Joey," "Joanie Loves Chachi" and "AfterMASH.")

Within the financial industry, however, the discipline of asset management has a "coaching tree" of its own—and it may be even more prolific and successful than Bill Walsh's legacy. Descended from Tiger Management, Julian Robertson's massively successful and pioneering hedge fund, today's funds run by the "Tiger Cubs" and "Grand Cubs" occupy a prominent place in the current world of asset management.

Consider this: Based on our methodology, there are currently 120 hedge funds with ties to the original Tiger Management. These funds that form what we'll call Julian Robertson's "investing tree" account for over $250 billion of AUM.

NFL coaches are ultimately judged by their win-loss record and number of championships. Yet, to truly dissect a coach's offensive and defensive schemes, one must go to the film room to, in the parlance of football coaches, "break down the tape." The financial industry doesn't afford observers that type of documentation; there aren't web cams at the morning meetings and idea dinners of prominent asset managers. Still, there are public filings that can be broken down like game film. It's those filings—quarterly 13F reports required by the SEC of institutional investors managing over $100MM in assets—that form the basis of our analysis. To be sure, there are limitations—managers are not required to disclose any short positions, among others. Nonetheless, our review of publicly available information reveals that similar to how many of Bill Walsh's assistants ran variations of his West Coast offense when they became head coaches, the progeny of Julian Robertson tend to have similar skill-sets and investing styles. To examine the performance of Robertson's progeny, we created a hypothetical blended portfolio of 49 managers, selected based on the criteria below. We call this the Novus Tiger Portfolio (NTP).

(See the Appendix for a complete review of our methodology as well as a glossary of terms used in this study.)

**PORTFOLIO MAKEUP – FILTERING METHODOLOGY**

| FILTERS | MANAGERS | NOTES |
|---|---|---|
| Initial hedge fund universe | 3,000+ | Complete Novus Hedge Fund database |
| Associated with Tiger | 120 | Per our definitions of Tiger Cub, Seed and Grand Cub |
| Above AUM threshold and active | 62 | Removes all managers too small, inactive or fund of funds |
| Equities strategies | 49* | Active in U.S. equities |

** The 49 managers used in this study were combined into a blended asset-weighted portfolio. For a list of these managers, please contact sales@novus.com*

*Cover Illustration by Jesse Lefkowitz*

# Performance

The Novus Tiger Portfolio ("NTP") outperformed an equivalent long position in the S&P 1500 by 53.9% since portfolio inception on January 1, 2006. NTP posted a 116.1% return over the seven-and-a-half year period, while the S&P 1500 returned 62.2% during the same period.

Over the seven-and-a-half year study, there have been three distinct periods of comparative performance:

1| From inception to the dawn of the financial crisis in September 2008, NTP generated significant outperformance versus the benchmark, with its cumulative spread peaking in Q2 2008 at 22%. That equates to an average monthly outperformance of about 75 basis points (ignoring compounding).

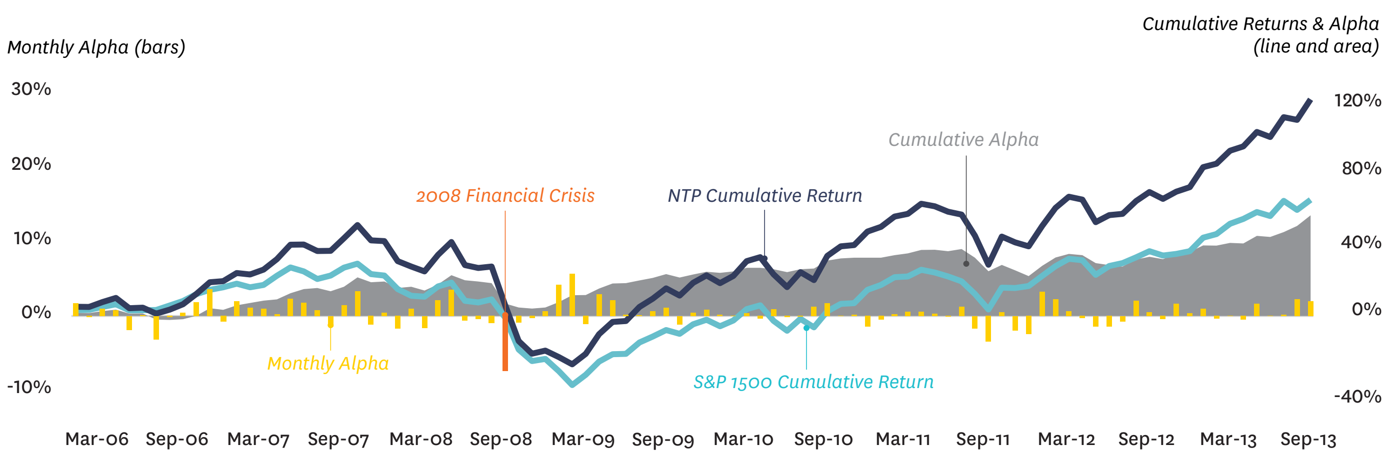
2| While it's no surprise that NTP fell sharply in value during September and October 2008, what's notable is how much worse it performed relative to the S&P. In just two months, the 22% lead built up over two-and-a-half years had been essentially wiped out.

3| Stabilization, relative to the index, began anew in November 2008, and by January 2009, a new period of consistent outperformance began that has persisted for nearly five years. The NTP recorded cumulative outperformance of 53.9% in the four-and-three-quarter years since the end of 2008—equating to an average outperformance of 95 basis points per month.

Taken as a whole, except for the extraordinary events that led to market dislocations in 2008, NTP has, over the long run, consistently posted an average monthly return in excess of the S&P 1500 somewhere in the range of 75 to 95 basis points. Over the 90-month period encompassed by our study, including the 2008 financial crisis, the outperformance has averaged 60 basis points per month.

Our review reveals that the underperformance during the onset of the financial crisis has concrete causes: over-allocation relative to benchmarks in the Technology sector, with multiple-manager participation in some of the biggest underperforming tech names. Critics can certainly cite this period as an example of the perils of groupthink, with the implication, if not explicitly stated, that it was bound to happen to any group of like-minded investors crowded into similar names. Yet, it might be equally accurate to infer that the Tiger-taught approach of stock selection is just as vulnerable to periods of severe market dislocations as any haphazard investing approach. Perhaps it is even destined to underperform in that environment. The term "100-year storm" is as widely overused by investment managers as the notation "ex-extraordinary items" by the companies they analyze, but in the case of the 2008 financial crisis that imperiled the American economy in a way not seen for 80 years, it seems prudent to at least consider examining investing performance with and without 2008's Q4 included.

**MONTHLY ALPHA/NTP RETURN VS. S&P 1500**



# Sector breakdown

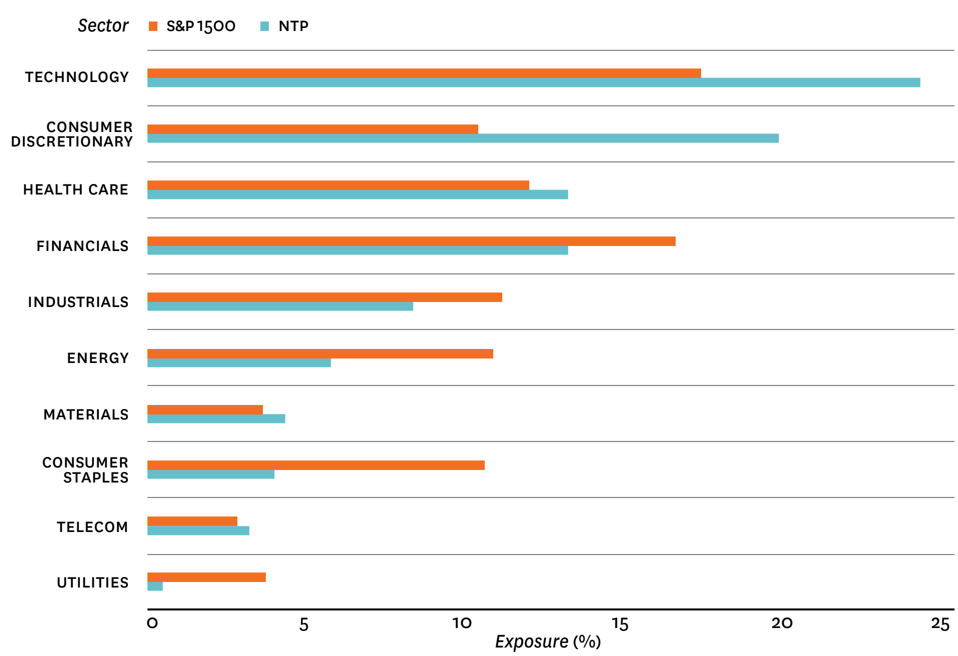
## Sector breakdown vs. S&P 1500

Within the investment community, Tiger alums have a reputation for being astute stock-pickers within sectors they understand with exceptional clarity. In his biography on Julian Robertson, Daniel Strachman describes Robertson using this exact pitch when presenting to potential investors. Therefore, over our eight-year observation period, it's not surprising that they show a fondness for exposure in both the Consumer Discretionary and Technology sectors, at the expense of exposure to Utilities and Energy stocks, compared to the benchmark.

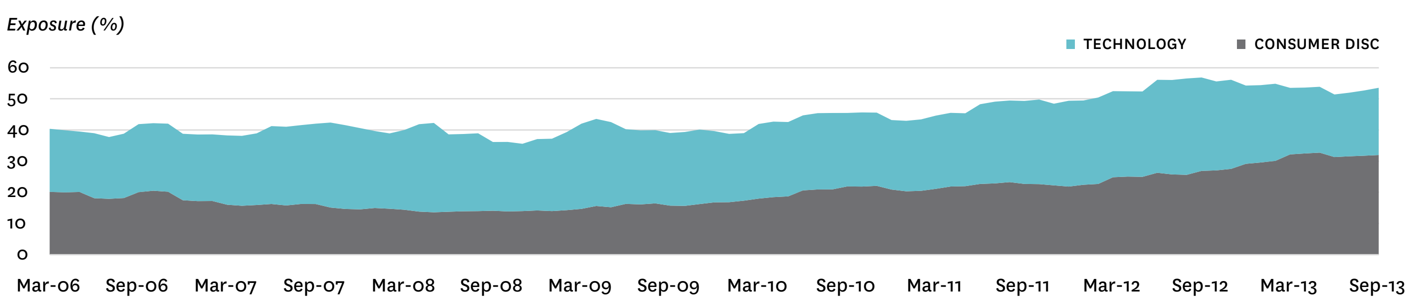
Although their exposure to both Consumer Discretionary and Technology has ebbed and flowed over the last eight years, the trend of Tiger alums overweighting those sectors has been consistent. Combined, the two sectors have accounted for an average of 44% of the portfolio compared to just under 28% for the S&P 1500 benchmark. Over time, we're able to see that this holds true not just on average, but also that allocation to these sectors has increased as their respective trades continued to prove successful, eventually accounting for more than half of the portfolio.

Whether it's part of the Tiger philosophy or training can't be known for sure, but as evidenced by the sector weightings below and an examination of alpha generated by sector on the following page, our analysis shows the Tiger descendants know what they're good at and allocate capital accordingly.

**AVERAGE SECTOR EXPOSURE VS. S&P 1500**




**TECHNOLOGY AND CONSUMER DISCRETIONARY**



## Alpha by Sector

Alpha, as we define it here, is a fund's outperformance in excess of a return that could have been achieved by passively investing in a benchmark index over the same period. The following table shows NTP's total alpha, broken out by sector, including the effect of compounding. While it's interesting to look at each sector's total contribution to alpha (first column on the left), we can further dissect alpha into two main components; security selection and sector allocation (the interaction explains one component's effect on the other). Thus, total alpha for each sector is the sum of sector allocation effect (over or under-weighting the sector relative to the benchmark), the security selection effect (choosing specific securities within the sector) plus the interaction of the two. The consistent display of security selection skill across all sectors is remarkable. In fact, over 80% of total alpha is attributable to security selection. Exposure to and stock selection within the Consumer Discretionary and Technology sectors contributed the most alpha to the NTP portfolio. As noted previously, those two sectors saw the largest capital allocations. While alpha from Consumer Discretionary benefited mostly from overweight allocation, Technology was almost exclusively driven by security selection. This is the strongest evidence available that Tiger-trained portfolio managers stick to what they are good at—and that they are very good at what they stick to.

**ALPHA BY SECTOR: BRINSON FRAMEWORK**

| SECTOR | TOTAL ALPHA | SECTOR ALLOCATION | SECURITY SELECTION | INTERACTION |
|---|---|---|---|---|
| Consumer Discretionary | **26.1%** | 14.2% | 5.4% | 6.5% |
| Information Technology | **20.9%** | 3.2% | 12.4% | 5.3% |
| Health Care | **6.8%** | 0.8% | 5.2% | 0.8% |
| Financials | **4.5%** | -0.9% | 7.9% | -2.5% |
| Materials | **3.8%** | 0.8% | 2.0% | 1.0% |
| Industrials | **1.4%** | -2.8% | 5.9% | -1.7% |
| Telecommunication Services | **-0.9%** | -0.9% | 0.4% | -0.4% |
| Utilities | **-2.6%** | -2.1% | -2.9% | 2.4% |
| Consumer Staples | **-2.9%** | -5.7% | 8.0% | -5.2% |
| Energy | **-3.2%** | -3.6% | 0.5% | -0.1% |
| Total | **53.9%** | 3.0% | 44.7% | 6.2% |

# Results of increasing AUM on portfolio composition

For any fund, there is an immutable law of investing: As assets under management (AUM) rise, at least one of the following three things must occur in the portfolio:

1| The total number of positions increases as the money is invested in new ideas.

2| The average market cap of the portfolio rises as bigger companies are needed to make an impact in the portfolio.

3| The scalability or liquidity of the portfolio deteriorates.

**AUM VS. POSITIONS, MARKET CAP & LIQUIDITY**

| | 2008 | 2013 | |
|---|---|---|---|
| AUM ($B) | 43.90 | 153.90 | ▲ |
| Pos. Count (Avg) | 33.64 | 38.25 | ► |
| Mkt. Cap ($B, Avg) | 7.80 | 15.80 | ▲ |
| Liquidity (%, 30d) | 82.30 | 54.60 | ▼ |

This is the quandary, similar to the Observer Effect in science, (the act of observation changes what is being observed) faced by allocators when considering an investment with a previously successful manager: Does the mere fact of investing with a successful manager change the manager's ability to be successful in the future? When a portfolio's allocation changes as a result of increasing AUM, it isn't exactly the manager's choice to make the change, per se. There are only these three levers a manager can pull to release the additional capital into the market, though they do get to choose which levers to pull and how far to pull them.

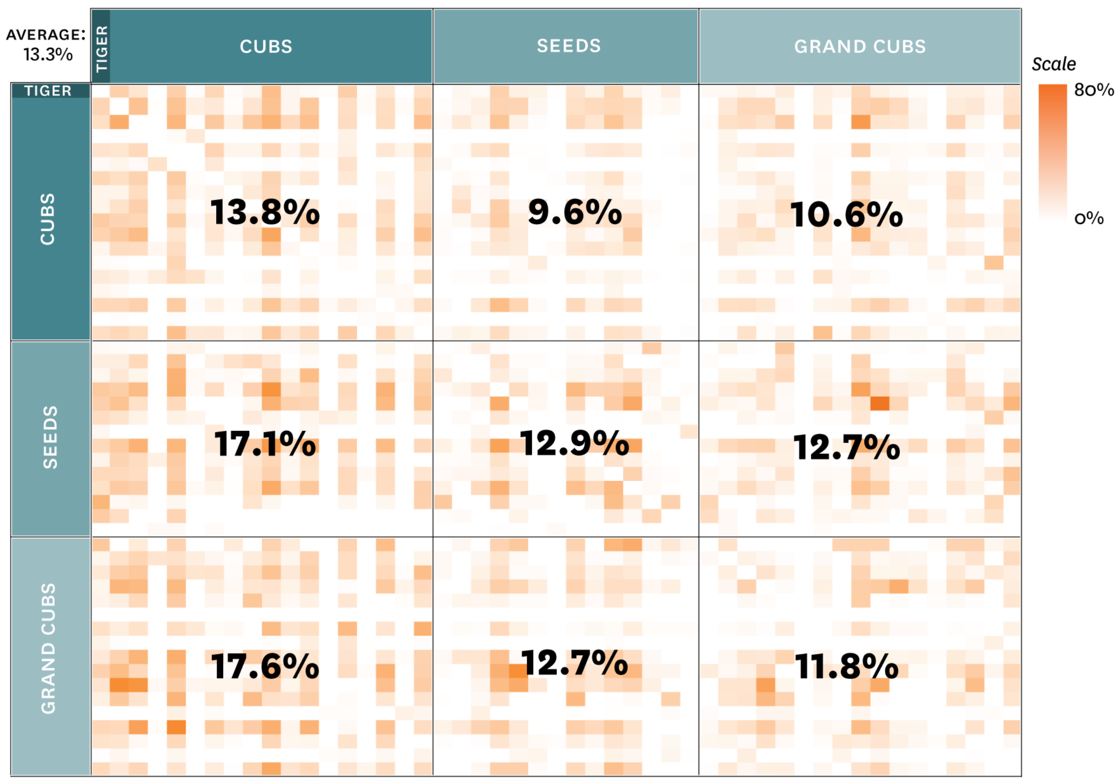
So which levers are managers in the NTP reaching for presently? The lever they pulled first increased exposure to larger names, with average market cap of the portfolio doubling since 2008. The liquidity lever was also eventually pulled, and not gently, with a 28% decrease in scalability as a consequence of AUM increasing 40% over the most recent 12 months. Tiger alums abstained from using the final lever and did not meaningfully increase the total number of positions as AUM rose. Just as NFL coaches of the same lineage have similar philosophies for in-game management, Tiger alums are known for using a fundamental, bottom-up analysis to select investments. Therefore, it's not surprising that they avoided significant increase in their position count by piling into more trades, which would implicitly lower their standards for inclusion in the portfolio.

There's no evidence that NTP can't continue to generate alpha on par with its performance at lower AUM. But the realities of allocating larger amounts have forced these managers to hunt for alpha in larger companies. The increase in average market cap of each holding was not enough to offset the even larger increase in collective AUM, and, as a result, liquidity has suffered.

# Overlap — Novus Tiger Portfolio

Recognizing that coaches who share a patriarch have similar tactics is not complicated. The results of their decisions are ultimately borne out on national television for anyone to see. For managers in NTP, is there a way to quantify how often their decisions result in the same trade at the same time? Are these managers running "the same plays" and to what degree? To get a picture of crowding or groupthink in a portfolio of managers, we often use overlap, which tracks similarity in portfolios based on identical positions and their respective weights. The Novus Overlap Matrix shows us exactly how similar their plays are. Not only can we compare the similarity between two individual portfolios, if we were looking for that granularity, we can also see which groups of managers are more overlapped with other groups. We found the highest overlap between Grand Cubs and Cubs. In other words, Grand Cubs closely follow the Cubs' positions and tend to oversize their allocations compared to the Cubs they are following. On the flip side, some of the lowest overlap numbers were found when comparing Cubs to Seeds. This means that Cubs follow Seeds significantly less than Seeds follow Cubs.

**CROSS OVERLAP MATRIX Q3 2013***

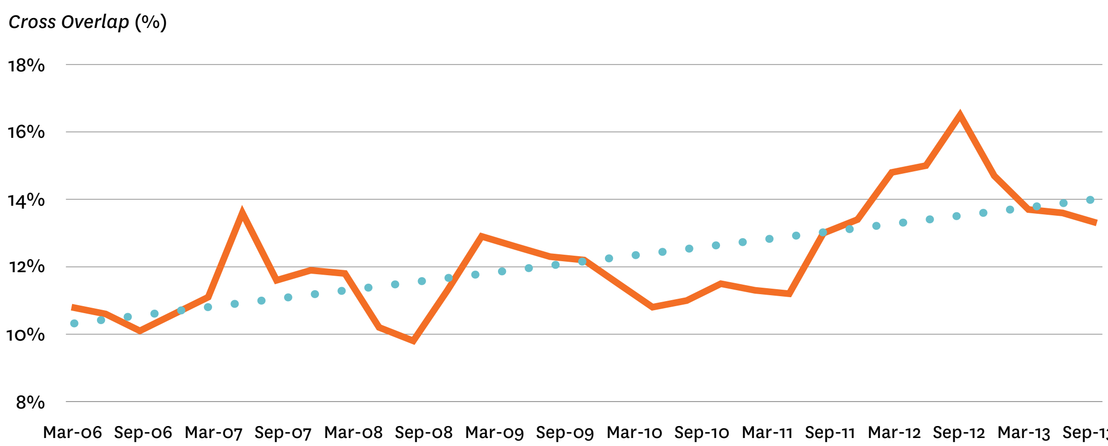



** For a version of the cross overlap matrix with manager-level granularity, please contact sales@novus.com.*

Another interesting relationship is that the overlap in either direction between Cubs and Seeds is smaller than between Cubs and Grand Cubs. This makes sense based on the relationship of Cubs and Grand Cubs. It is logical that managers who spun out of Cubs would have similar investment theses and research processes, and Seeds lack this shared history with Cubs or Grand Cubs, having received only funding from their common patriarch.

Another useful way to look at NTP overlap is to examine the average quarterly overlap for the entire portfolio through time. Since the beginning of 2006, the average overlap in the portfolio has ranged from 9.8% to 16.5%. The average overlap of the entire portfolio trended upward, peaking in September 2012. Since then, the portfolio has been trending back toward the average, and it is yet to be seen if this is just mean reversion or a larger shift in the overlap trend among NTP managers.

## OVERLAP TREND



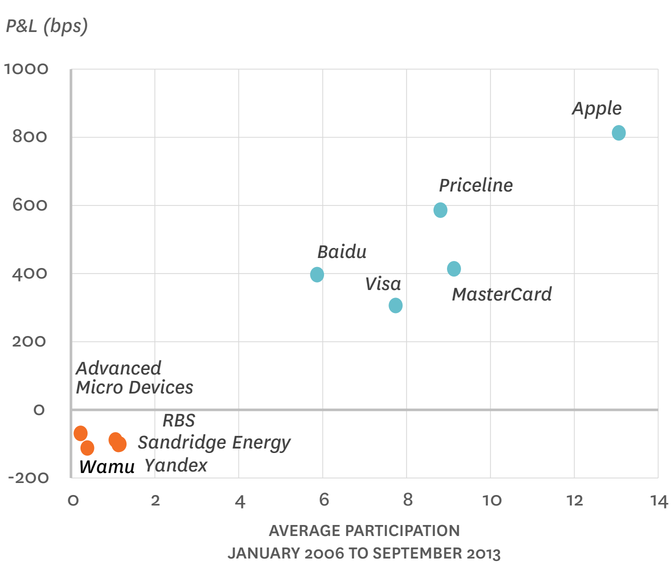
# The plays: winners and losers

Although meant as a cynical observation when he first said it, President Kennedy's statement that "Victory has a thousand fathers, but defeat is an orphan" is remarkably applicable to NTP's profit and loss in single names. Winners (in blue) have many more managers invested in the name compared to losers. It's not just a trend but an inarguable fact: The portfolio's biggest winners since inception show a strong consensus among managers in the portfolio, while the biggest losers average less than two managers apiece.

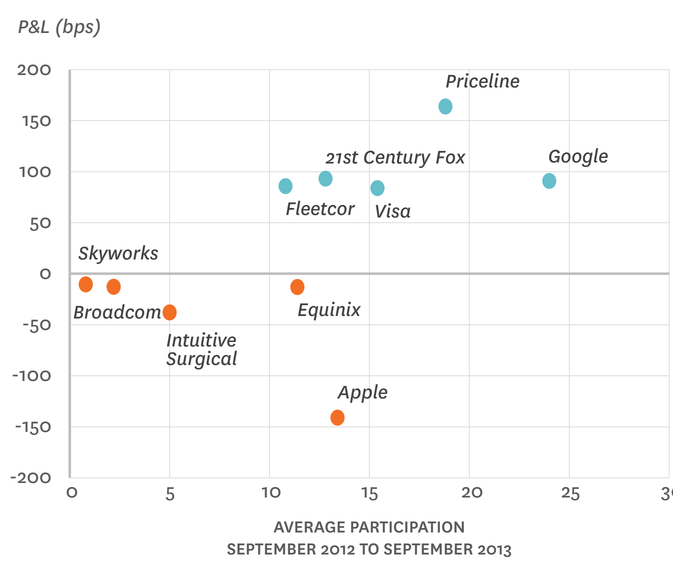
One benefit to the portfolio is that because the losers haven't been broadly held, their impact on performance has remained relatively muted. For example, the dollar loss from NTP's investment in WAMU, the top loser in the portfolio, was $570MM. Currently, NTP's unrealized gains in Dollar Tree Inc. cover this loss on their own. Why is that notable? Because Dollar Tree is only the 31st-largest contributor to the entire portfolio's gains. Even the 2013 portfolio losses in Apple and Equinix, which appear as widely held losers when looking at the latest 12 months ending 9/30/2013, should be considered in broader context—both represent winning trades over the entirety of the portfolio. Significant losing bets over the course of the fund are isolated, relative orphans if you will, due to few managers participating in the investment.

Even part-time poker players are aware of the adage that "if you can't spot the fool at the table, it's you." Tiger alums should take note the next time they gather for one of their idea dinners: If you're the only one at the table with a big position in a name, it's quite possible you're going to feel foolish at the next gathering. Within their universe of fellow Tiger descendants, it hasn't always paid to be contrarian, while consensus has been rewarded generously.

**WINNERS & LOSERS HISTORICALLY**




**WINNERS & LOSERS RECENTLY**



Many investors follow the stock picks of well-known managers, and it is only natural to wonder how often their ideas turn out to be winners. In other words, how often are the Tiger Cubs right when they invest in a stock?

George Soros, both a contemporary of Julian Robertson and legendary figure within the hedge fund world in his own right, wrote, "It's not whether you're right or wrong that's important, but how much money you make when you're right and how much you lose when you're wrong." Thanks to his 1988 autobiography, *The Alchemy of Finance*, Soros gets credit for the advice, but certainly Robertson eyed similar metrics at his firm and took appropriate action as needed. That tendency to let winners run, or to water the flowers and cut the weeds, if you will, is clearly visable in the NTP as well. Over the time period examined, Robertson's Tiger Management showed a 70% batting average - that is, 70% of his names were winners for the period. This number is in line with the broad market, as the S&P 1500 also showed a 70% batting average. His progeny show batting averages below 60%. However, the win/loss ratio for the Cubs is 2.62, with the average winner making 7.9 bps and the average loser costing 3 bps. This means that their winners on average contribute over two times more than their losers detract. Talk about watering your flowers! Robertson's own win/loss number, while still respectable, is a bit behind at 2.36.

## PEDIGREE BREAKDOWN

*January 2006 to September 2013*

| PEDIGREE | NUMBER OF WINNERS | NUMBER OF POSITIONS | BATTING AVG (%) | WIN/LOSS RATIO | AVG WINNER (BPS) | AVG LOSER (BPS) |
|---|---|---|---|---|---|---|
| Cubs | 1,559 | 2,759 | 56.92 | 2.62 | 7.88 | -3.01 |
| Grand Cubs | 1,021 | 1,813 | 56.50 | 2.01 | 3.25 | -1.62 |
| Seeds | 748 | 1,474 | 51.13 | 1.67 | 2.65 | -1.59 |
| Tiger | 97 | 138 | 70.29 | 2.36 | 1.08 | -0.46 |
| Total | 3,425 | 6,184 | 55.72 | 2.36 | 5.17 | -2.19 |

# Conclusions

The current hedge fund environment finds the average manager defending performance fees as the entire industry reevaluates the value that hedge funds provide as investment vehicles. As a group, managers who fall under Julian Robertson's Tiger family tree significantly outperformed their benchmark, as their common philosophy of investing in undervalued companies, however defined, bore fruit.

The Tiger alums have a reputation for excellent stock-picking ability and assert in interviews that bottom-up analysis is their core competency. Our analysis shows that in virtually every sector, NTP generated excess returns, or alpha, overwhelmingly with stock selection skill. Further, alpha generated from sector selection matched their largest exposures, demonstrating awareness of where their investing edge lies.

While the portfolio's average cross overlap has trended down from its all-time high in Q3 2012, the overall trend of the portfolio has been increasing overlap among managers' holdings. This isn't necessarily troubling; NTP's winners consistently have broad ownership among managers, while the biggest losers tend to have much smaller sponsorship. A sign that could be more troubling, however, is a decrease in the liquidity characteristics of the portfolio, as AUM has grown to record levels.

Upon closing his flagship fund, Julian Robertson at first invested with managers he had observed at his fund—managers presumably with the investing skills he valued. This launched the Tiger Cub investing tree. Just as Bill Walsh's assistants installed his West Coast offense across the league, the dozens of fund managers operating today as part of the Tiger family share similar investing traits. As of now, these managers have not crowded each other out, as alpha is still being generated at a consistent rate. He may not have meant to create such a prodigious family tree, but Julian Robertson's standing as the patriarch of the most successful family of investors appears secure.

One last note on NFL coaching trees: Old-time purists like to point out that Walsh himself is a disciple of Paul Brown, one of the virtual founders of the National Football League. Walsh rose to prominence in the 1970s as the Offensive Coordinator of a free-wheeling, high-scoring and innovative offense of a Brown-coached team. Therefore, some sports historians argue, it's really Paul Brown's coaching tree that has spawned so much talent.

It must be something about the term "Tiger"—Paul Brown coached the Cincinnati Bengals.

## Methodology

For the purpose of this study, we selected 49 U.S.-focused and long/short-oriented institutions related to Tiger Management and combined all reported positions into a market value-weighted portfolio, Novus Tiger Portfolio (NTP). Every disclosed long equity position known to Novus is included in the portfolio and is included from the end of the quarter it was first reported until the end of the quarter it was closed or until it was superseded by subsequent disclosure by the same manager. The portfolio was rebalanced quarterly to reflect any disclosure updates and priced monthly to calculate profit and loss (P&L) based on security price fluctuations. The value of each position was calculated based on the reported net long percentage of shares outstanding for each security and that security price. Exposures were calculated by taking the sum of the market values in a given category and dividing that by the sum of all market values for each day. For example, to calculate exposure for "Tiger Cub" on 12/31, we obtained the sum of all market values for positions reported in institutions belonging to "Tiger Cub" and divided it by the sum of all positions on that day.

### TERMS

**Novus Tiger Portfolio (NTP):** A hypothetical portfolio built using the methodology above from publically available data. This is not an investable portfolio.

**Security:** An investable instrument from a single issuer. This may also be referred to as a “name,” “stock” or a “company.” A security is associated with a return that is independent of NTP or managers’ investment.

**Position:** A capital allocation by a manager to a security. Each separate allocation is a unique position. Positions are associated with a dollar amount and may be long or short.

**Category:** A criterion for classification. Examples include country, sector or market cap.

**Exposure:** The sum of all market values in a specific category. Exposure can be expressed as a dollar amount or as a percentage of total portfolio value.

**Institution:** A management company with one or more long positions. Also referred to as a “manager.”

**Participation:** The number of institutions disclosing a long position in a specific security.

**Trade:** The expression of an investment thesis through one or more positions.

**Long interest:** The sum of all disclosed long equity positions as percent of shares outstanding for each security.

**Tiger:** Tiger Management, LLC

**Tiger Cub:** Hedge fund with key money manager(s) who worked directly with Julian Robertson at Tiger Management and were not initially funded by Julian Robertson.

**Seed:** Hedge fund that was initially funded by Julian Robertson after 2000.

**Grand Cub:** Hedge fund with key money manager(s) who at some point worked in a Seed, Cub or Grand Cub but were not initially funded by Julian Robertson.

## Assumptions

This paper relies exclusively on publicly available data; we assume it is correct. All trade theses outlined are based on public sources, are hypothetical and may not correspond to actual manager theses on any particular trade. We assume all positions filed for Q4 2005 were initiated on 12/31/2005 to calculate P&L for January 2006 and afterwards. The exact time the positions were initiated is not reported, so we assume trades took place at the end of the last trading day in the reporting quarter.

## Limitations

The quarterly nature of the reporting data we use provides a limitation to the granularity of the data compared to events in real time. Calculating P&L at quarter end causes potential problems, especially when there has been large news or price changes in a stock during that quarter. We lack short disclosure and did not include options or derivatives in our data. This can potentially obfuscate the portfolio’s strategy or true P&L in a name for a given period of time. Finally, the tracking record on this data starts only after the institution’s AUM exceeds the $100MM threshold, and there are no records available before this threshold is broken.

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