

ARCHWAY

TECHNOLOGY • PARTNERS

Hedge Fund Operations and Controls

Commentary and Qualitative Data



November 2006

LETTER FROM THE PRESIDENT

Dear Reader,

Thank you for taking the time to review this white paper and understand its intended message.

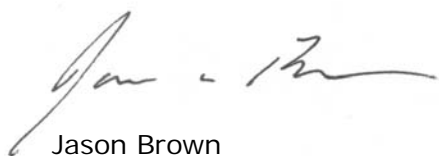
Please be advised that there are some very direct messages communicated within this study. We are not attempting to disparage the industry within which we all participate. Rather, we are providing our perspective on the maturation and growth of our collective industry.

Various statements contained within this study will apply directly to you and your operations, while others may be generalizations of the industry as a whole and be contrary to your specific businesses. We recognize through our experiences with the hundreds of hedge funds operating on our technology platforms that no single set of statements can wholly describe every fund in this industry. As such, we have taken our best attempt at characterizing "typical" struggles.

The results of this study are presented in a quantitative fashion. Understanding that the ATWeb platform was used to produce the presented results, the authors of this study have made every effort to present the results in an unbiased fashion.

We are excited about what the future holds and are thrilled to be a participant in the ongoing evolution of the global hedge fund industry.

Enjoy the results,



Jason Brown
President
Archway Technology Partners, LLC

INDUSTRY CLIMATE

The US private equity industry is at a crossroads in its evolution. The most notable segment of the industry, hedge funds, have been traditionally associated with hyper-wealthy individuals and families where wealth has provided access to investment vehicles producing superior returns that are not available to the general public. Hedge funds have only helped to propagate this perception by maintaining very low profiles. By and large, the only significant insight the general public gets into the world of hedge funds is when something goes wrong; either through hedge fund meltdown or scandal.

By contrast, European hedge funds have been embraced by the removal of many restrictive guidelines on investor demographics and fund advertising, ultimately making hedge funds more generally accessible to the masses. This has reduced the negative perception of the industry in the public's eye and has opened a new pool of capital to the managers themselves, thereby fostering the growth and maturation of the industry.

Not surprisingly, London is now third in hedge funds only to New York and the Gold Coast. Commentators on the industry now estimate that roughly one quarter of the global hedge fund industry assets can be found outside the borders of the United States.

As is evidenced by the success and proliferation of foreign hedge fund operations, the US hedge fund industry could take a page from those outside our borders in understanding how an industry can prosper with the right balance of opportunity and regulatory oversight.

This does not imply that the domestic US hedge fund industry isn't progressing or trying to progress. Begrudgingly, the industry has been moving more to the forefront of thought and the front pages of industry news through a combination of the prospect of greater reach and access to capital and unfortunate blow-ups and scandal. Although the industry could benefit significantly from an easing of subscription restrictions and compliance with greater overall regulatory oversight, hedge funds have largely been their own greatest adversary in the maturation of their own industry.

PATH TO GROWTH

With the exception of perhaps the largest hedge fund operations, most hedge fund managers would agree that loosening restrictions on investor qualifications would greatly enhance their ability to build long-term, thriving businesses. For many managers, it is not simply the ability to structure a well thought-out product and generate agreeable returns; it is the restriction on marketing that is the most significant obstacle to the growth of their businesses.

As has been said here and elsewhere ad nauseam, the US hedge fund industry is most notably characterized by a handful of very significant meltdowns and scandals. This has left the general public with a very negative perception of an industry that is privy to private information and is only in existence to help the rich get richer. This perception is more targeted towards the intention of those operating hedge funds than a quantitative and objective review of the industry.

The authors of this study maintain deep relationships with many across hedge funds small and large and those with operating strategies both simple and complex. It is very apparent most of these operations strive to maintain well controlled

businesses with the genuine best interest of their investors at heart.

Despite the best of interests and intentions of an industry, the truth is that many hedge fund operations remain loosely controlled environments that lack even the semblance of operational control. This is alarming when considering that many hedge funds carry higher market values than a sampling of Fortune 500 companies. Expressed as a hard truth, many of those in the US hedge fund industry operate more like investment clubs than real businesses.

It is important, however, to understand why hedge funds are not being operated with the care required. After all, if hedge funds want access to capital and they want to operate like well controlled businesses, why are they being operated with so few controls?

Would General Motors build a new car without being able to market it on a broad basis? This is exactly what most hedge fund managers are asked to do: build a business with limited access

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to customers. This constraint forces the hedge fund manager to make economic decisions on where to focus attention in building his or her business. Attention is first placed on attracting capital, then generating returns to maintain a customer base, and so-on. This argument is what most would like to present as a good reason more control is not applied in hedge fund operations. Truth be told, it is not accurate.

The argument above is a redirection of responsibility that allows a hedge fund to operate with loose controls in a “justifiable” manner. After all, if I can’t market, how can I generate the foundation of a business to implement the required controls?

OBSTACLES TO GROWTH

The truth is that a business of any size can be built on a solid set of controls. Back to the original question – why are there so few controls found in US hedge fund operations? There are two driving factors why US hedge funds lack internal controls and formal operations.

First, hedge funds are traditionally operated with two sources of income: the management fee and the incentive fee. The management fee is intended to cover operating expenses, salaries, rent, etc. The incentive fee is the reward for generating profits for the investors, usually characterized in terms of excess over a predefined and representative rate of market returns.

Because the expenses required to operate a hedge fund are much lower in total and simpler in nature than more traditional businesses, there is a very clear correlation of every dollar of expense as related to every dollar that goes into management coffers. After all, there is no return of the management fee for expense dollars not spent. It is all considered excess and remains property of the management company.

Long story short, fund management will feel a very direct impact of expenses associated with running the business and will usually elect to only invest in the operations of the business to the extent those investments will be seen by prospective investors and result in additional contributions.

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The second driving factor tends to be the management company employees themselves. Hedge funds employ many of the brightest investment minds in the world. These minds are often steeped in rich history from Wall Street and have had exposure to the most creative and rewarding investment strategies. This is a very different set of experiences than those who cut their teeth in large audit and accounting firms.

Unfortunately, to truly understand business operations and controls, the latter of experiences are far more valuable than the former.

Oftentimes hedge funds open with the brightest of investment talent and virtually no understanding of business operations.

Because many hedge funds launch without any practical, or unpractical, experience operating businesses, the operations and controls are either given little thought, if any at all. All “operational” focus is targeted at ensuring the appropriate systems are in place to allow investment evaluation and decision execution. Most management considers this to be good focus on “back office” controls as it usually involves implementation of technology and process. Unfortunately, as expressed in true day-to-day hedge fund operations, these functions are still part of the “front office”, or revenue-generating activities.

If investment evaluation and execution systems and processes are not truly back office functions, then what does back office mean?

HEDGE FUND OPERATIONS

The back office of a hedge fund operation can be generalized into four primary aggregations of business function: Portfolio Accounting, Partnership Accounting, Investor Accounting and Investor Relations.

Not surprisingly, a significant component of a hedge fund’s back office will be driven by the activity found in the management of the portfolio. This should not be confused with the activities associated with investment and evaluation; rather, it is the financial implications of the decisions and executions that are conducted. Portfolio Accounting is easily described as understanding the character of profit and loss

generated by a fund's portfolio (e.g. unrealized gains, short term gains, long term gains, etc.).

Raw portfolio profit figures are virtually useless when trying to manage the taxable implications of profit, which can have a tremendous effect on the net resultant profit an investor enjoys.

Beyond Portfolio Accounting, management focus gets blurry if the eyes are even open at all. If General Motors owned its dealerships, General Motors would not report to the street profitability of the dealerships. Nor should hedge funds assume that the financial character of returns generated by the portfolio alone be construed as partnership accounting.

Partnership accounting is "the rest of the picture" in truly understanding a hedge fund's balance sheet and periodic income statements. Although the portfolio is a significant contributing factor to these financial statements, there are several other influences in the true financial complexion of a hedge fund. Most hedge funds maintain bank accounts and relationships with other service providers that will generate additional fund profit or expense, including the impact of various accruals. All of this information is required to truly present a consolidated set of financials that describe the performance and health of a hedge fund's operations.

Moving down the line, the next level of detail is at the investor level. Ultimately, a hedge fund is operated under partnership accounting guidelines, which means that the financials produced by the fund are truly the property of an underlying set of investors. All income or loss must be translated into the effect that the income or loss has on each individual investor. Furthermore, mechanisms must be in place to ensure that the income carries the appropriate taxable nature as the hedge fund industry has available to it many methods of accounting for gain character at the investor level. Also included in this function is understanding the effect of management and incentive fees, both of which are traditionally calculated at the investor-level for US hedge funds. These fees can also have an effect on how the character of income or loss at the investor level is described.

Lastly, not only are hedge funds required to maintain detailed records for very complicated functions of portfolio, partnership and investor accounting, they are also responsible for reporting

on a routine basis to their investors the performance of investor capital. This function is more than just reporting. Since hedge funds are restricted from most forms of marketing, most capital is raised either directly or indirectly through existing investors. This means that keeping investors satisfied is imperative to the future ability of the fund to raise capital.

Over 75% of the transactions required to characterize a well-controlled hedge fund's operations are related to Partnership and Investor Accounting, not Portfolio Accounting, as is traditionally assumed.

It is challenging to describe hedge fund operations in merely a series of paragraphs under four main headings. But even within the paragraphs above, it is easy to begin understanding the true complexities of hedge fund operations. These are the same operational characteristics that are often overlooked as they require an understanding of

partnership accounting, not portfolio management, to truly articulate.

The hedge fund industry has not yet matured to the point where it is garnering attention from independent evaluation sources such as Gartner Group. As such, it has until now been difficult to speak quantitatively as to where the most attention should be focused when applying controls in hedge fund operations.

QUANTITATIVE STUDY

Archway Technology Partners conducted a study where they operated a representative hedge fund for 12 months in the ATWeb accounting platform. ATWeb was used in this capacity as it supports, in an integrated fashion, the business functions described in this paper. As such, it presents a logical foundation upon which to understand the interrelationships of hedge fund operations.

The goal of the study was to generate a data set that could then be evaluated to quantifiably characterize the back office of hedge fund operations.

After the sample fund was operated for 12 months, every transaction created in the system, either manually by users or automatically by the system, was assigned to one of the four primary business functions: Portfolio Accounting, Partnership Accounting, Investor Accounting and Investor Relations. Listed below are the actual results from the record-function assignment exercise.

Function	Transactions	Percent of Total
Portfolio Accounting	10,364	18.40%
Partnership Accounting	8,873	15.76%
Investor Accounting	34,112	60.56%
Investor Relations	2,976	5.28%
Total	56,325	100%

The raw data presents a striking result whereby less than 19% of all system transactions were attributable to the Portfolio Accounting function. Understanding most hedge fund operations focus exclusively on portfolio management and the natural byproduct of portfolio management being portfolio accounting, far less than one quarter of the data required to characterize a well controlled hedge fund operation would be generated.

Furthermore, over 75% of the transaction data is directly attributable to Partnership Accounting and Investor Accounting; the two functions most hedge fund operations understand the least. Additional data is certainly not required to demonstrate very clearly why most hedge fund operations are still in disarray and, most alarming, not even recognized as being in disarray by those responsible for maintaining order.

The results above would lead any reader to naturally draw the conclusion that hedge fund managers should focus on Investor Accounting and by doing so would add tremendous control to their operations. Although the numbers would indicate this perspective to be true, many business processes within a hedge fund's operations actually span multiple, if not all, of the four major functions outlined earlier.

To help characterize this relationship between the four major operational functions, Archway went to an additional level of detail in the study by decomposing a hedge fund operation into the major business processes conducted. Business processes are those tasks that need to be performed by a hedge fund management organization, as compared to the four business functions which are classes of responsibility of the hedge fund as a whole.

Although a generalization, the ten business processes below were selected to characterize a hedge fund operation.

- Accounts Payable
- Accounts Receivable

- Asset Management
- Financial Statements
- Investor Allocations
- Management and Incentive Fees
- Withdrawal Processing
- Contribution Processing
- Investor Statements
- Tax Returns

Again, every transaction created in the system, either manually by users or automatically by the system, was assigned to one of the ten business processes described above. Listed below are the actual results from the record-process assignment exercise.

Process	Transactions	Percent of Total
Accounts Payable	208	0.37%
Accounts Receivable	108	0.19%
Asset Management	127	0.22%
Financial Statements	7,418	13.17%
Investor Allocations	36,254	64.38%
Mgmt and Incentive Fees	3,727	6.62%
Withdrawal Processing	43	0.07%
Contribution Processing	213	0.38%
Investor Statements	3,449	6.12%
Tax Returns	4,778	8.48%
Total	56,325	100%

Only 19% of the transactions required to characterize a well-controlled hedge fund's operations are related to Portfolio Accounting, the one area upon which hedge funds traditionally focus.

Although interesting that the Investor Allocations process accounts for more than 64% of the total transactions in the system, these numbers alone still do not address how the ten business processes actually participate in satisfying each of the four business functions we began with.

In order to understand this relationship, we must generate a matrix of the original transaction assignments to the four business functions with the assignments of the same transactions to the ten business processes. This combination will help articulate the importance of a cross-functional view of a hedge fund business in delivering on the business processes required to operate the business as a whole. Presented below is the matrix of these figures.

	Portfolio Accounting	Partnership Accounting	Investor Accounting	Investor Relations
Accounts Payable	0	108	0	0
Accounts Receivable	0	208	0	0
Asset Management	0	127	0	0
Financial Statements	3,231	4,187	0	0
Investor Allocations	4,440	1,927	29,887	0
Mgmt and Perf. Fees	1,232	1,795	700	0
Withdrawal Processing	0	20	23	0
Contribution Processing	0	106	107	0
Investor Statements	0	0	473	2,976
Tax Returns	1,461	395	2,922	0

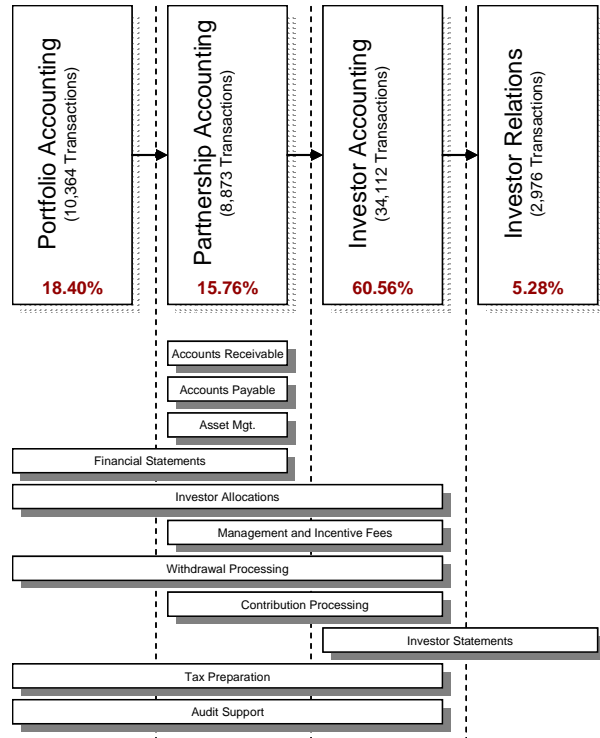
The first conclusion that can be drawn from the table above is that several mission critical processes span multiple functional silos, demonstrating the importance of addressing a full back office operation when evaluating the controls of any hedge fund.

The second, and arguably most important element of the study, is that in order to truly perform the Investor Allocation process, which accounted for more than 64% of the transactions included in the study, a hedge fund operation must address all components of back office management including Portfolio Accounting, Partnership Accounting and Investor Accounting.

The cross-functional nature of business processes found in hedge fund operations is the result of the dependence of processes such as Investor Allocations on data generated and required to maintain true Portfolio Accounting. Investor Allocations is but one example of this type of cross-functional process found in hedge fund operations.

Shown below is a graphic depicting this relationship between the four business functions and the ten business processes.

Expressed as a hard truth, many in the US hedge fund industry operate more like investment clubs than real businesses.



This data underscores how focusing on portfolio management, and possibly achieving some of the portfolio accounting obligations along the way, leaves most hedge funds significantly lacking in the ability to operate their business and with only a fraction of the data required to perform their most important functions such as Investor Allocations.

CLOSING THOUGHTS

An independent study conducted by Management consulting firm Capco suggests that approximately 50% of all hedge funds that fail do so because of operational risks; not because of poorly returning investments or investment risks.

It is not difficult to understand after having reviewed the quantitative results presented in this study why the Capco study produced such shocking results.

Ultimately, oversight of the business functions and processes required to operate well-controlled hedge funds will conspire in prohibiting the growth of the US hedge fund industry as a whole.

Without significant change, US hedge funds will never be able to comply with tighter regulations, which will ultimately preclude

their access to larger pools of capital. Furthermore, lack of controls will result in more visible meltdowns and propagate the negative perceptions of the industry as a whole.

The US hedge fund industry has a tremendous opportunity to further establish itself as one of the most integral components of the global financial industry. It also has the potential to encumber its own growth and continue undermining its own perception in the public eye. Either way, the industry will always struggle until it begins listening to those that understand well controlled businesses and focus on establishing a complete back office picture.

Archway Technology Partners, LLC

230 Park Avenue
10th Floor
New York, NY 10169

(866) 491-2751
(212) 904-0279

Archway Technology Partners, LLC

3 Parkwood Crossing
450 East 96th Street
Suite 500
Indianapolis, IN 46240

(866) 491-2751
(317) 581-6276

www.archwaytechnology.net