



# **Bank of America Merrill Lynch Hedge Fund Consulting**

**Overview of the Form PF  
Service Provider Landscape**

March 2012





All information provided herein is for discussion purposes only, and is not intended to be nor should it be construed or used as investment, tax or legal advice. All recipients should consult with their legal counsel, tax, financial and other advisors with respect to any information provided herein. Given the continuously evolving nature of the new regulations, hedge fund managers should be following the situation closely.

As a result of the Dodd-Frank Act, the SEC has created a new regulatory filing for SEC-registered investment advisors to hedge funds and other private funds: Form PF. With the data reported on Form PF, the SEC is gathering information to more actively monitor and track systemic risk across the private fund industry. Completing a Form PF filing can be a daunting task, especially for managers with minimal staff. As a result, a niche industry is rapidly emerging within the hedge fund service provider community to provide assistance. The purpose of this paper is to provide an overview of the Form PF service providers and their offerings, as of the date of this publication (March, 2012). Given the rapid developments, we will be publishing updates to this document periodically.

Form PF represents the most significant regulatory requirement imposed to date on private fund advisors. Completing it will require an extensive data aggregation, normalization and reporting exercise for most managers. Requiring some 2,000 individual data points, the manager must identify and disclose information on a wide range of topics.

The scope and frequency of filing, as well as specific sections, is dependent on the type and amount of an investment advisor's Regulatory Assets Under Management (RAUM). Calculating RAUM is a new requirement and critical to properly understanding your filing obligations. Please consult your legal counsel to ensure all relevant assets are included in your calculation.

RAUM Threshold	Type of Fund	Filing Frequency	Due Date	Effective Date	Required Sections			
					1	2*	3	4
\$150m	All	Annual	120 days after fiscal year end	Q4 2012	●			
\$1b	Liquidity Fund	Quarterly	15 days after quarter end	Q4 2012	●	●	●	
\$1.5b	Hedge Fund	Quarterly	60 days after quarter end	Q4 2012	●	●		
\$5b	Hedge Fund	Quarterly	60 days after quarter end	Q2 2012	●	●		
\$2b	Private Equity	Annual	120 days after fiscal year end	Q4 2012	●	●		●

\* Section 2a requires reporting aggregate data across all of the advisors's hedge funds. A separate Section 2b must be completed for each qualifying hedge fund.

## Examples of Key Data Elements By Form PF Section

### Section 1

- Regulatory AUM, gross and net asset value, and breakdown of managed accounts
- Sources and levels of borrowing/leverage
- Liability on Level 1/2/3 assets
- Ownership and investor details

### Section 2

- Usage of OTC and centrally-cleared derivatives
- Exposure and monthly turnover by asset class
- Counterparties and posted collateral
- Risk metrics

### Section 3

- Side pocket and investor gate info
- Investor liquidity
- Portfolio liquidity by asset class

### Section 4

- Applicable only to private equity funds, and therefore out of scope of this document

## Where Is the Data?

The necessary data to complete Form PF is spread across fund administrators, prime brokers, counterparties, and a manager's internal systems.

**Fund Administrators:** Most advisers work with a third party fund administrator to maintain their official books and records. As a result, it is advisable to source as much data as possible from the fund administrator. A fund administrator may have a substantial majority of the necessary data including:

- Portfolio Holding
- Position detail and trade activity
- Counterparty exposure
- Pricing/valuation data
- Investor data from the shareholder registry

In addition, some fund administrators may calculate or be able to provide risk data as well.

**Prime Brokers/Swap Counterparties:** A fund's prime brokers and swap counterparties can be the source of data on:

- Borrowings and unencumbered cash
- Financing terms
- Mark-to-market counterparty exposure
- Trading and clearing activity
- Asset rehypothecation
- Collateral posted

**Internal Systems:** Depending on the sophistication of a fund advisor and the complexity of the funds managed, risk calculations and aggregated data some may be sourced from internally operated and maintained systems. Typical source systems include:

- Risk management systems
- Portfolio management systems
- Data warehouses

### Key Drivers of Complexity

Form PF represents a new type of regulatory filing in that it reports activity at the investment manager level rather than the individual fund level. Since an investment manager may advise multiple funds or private pools of capital, the data must be normalized and aggregated across a wide range of disparate sources. Factors that impact the complexity of this exercise include:

- Number of funds and/or separately managed accounts
- Number of prime brokers (per fund or managed account)
- Number of administrators
- Asset classes traded by each fund

### Creating a Form PF Filing Program

As Form PF will need to be filed annually or quarterly, depending on a fund manager's size and type, it is advisable to develop a defined and repeatable process. Such a program could consist of 7 steps:



**1. Identify Reportable Entities and Data Sources:** Take inventory of all funds and separately managed accounts advised by the manager. Note all prime brokers, counter-parties and fund administrators used. Also, meet with legal counsel to review and understand the applicable level of Form PF reporting requirements.

**2. Data Gap Analysis:** Before answering any of the Form PF questions, it will be necessary to review each one and determine the specific source data necessary to derive the answer. This step will be most onerous during the initial filing. However, it should also be conducted at the start of each filing period to capture any new requirements or data sources.

**3. Data Collection and Normalization:** Once the specific source data has been identified, it will need to be collected into a central repository. The data from disparate sources will then need to be normalized for consistency across the entire data set. The SEC has also created a new classification scheme for data to be used in Form PF. Categories including strategy, country, asset type, and region have specific options. This classification scheme will likely be different from what the investment manager uses internally, so an extra mapping step may be necessary.

**4. Data Aggregation and Form Population:** After the data is collected and normalized across reporting entities, it is then possible to aggregate that data into the composite values requested by the form and answering specific questions. This step may also involve performing risk calculations such as VaR and historical scenarios. Best practices in this step include an audit trail that captures inputs and decisions made in the normalization process, as it could be important to provide clarification to investors or the SEC at some point in the future.

**5. Test Runs:** Creating a “test filing” prior to final submission will pinpoint the questions/sections where source data has not been completely captured or normalized. Repeat steps 2-5 as often as necessary until each question has been answered satisfactorily.

**6. Submit and Archive the Filing:** Form PF must be submitted electronically to FINRA’s new PFRD (Private Fund Reporting Depository). Once submitted, the filing should be archived internally, as subsequent filings will require explanations on values that have changed between filing periods.

**7. Update Disaster Recovery/Business Continuity Plan:** Once the initial filing has been completed, it is important to ensure the investment manager’s disaster recovery/business continuity plan is updated to include the Form PF filing process.

## Who Can Help With Filing Form PF?

As the deadline for the initial Form PF filings draws closer, many service providers are rolling out offerings to assist their private investment manager clients. The participants and offerings in this segment are evolving rapidly, but they can generally be grouped into three categories:

### Fund Administrators

Form PF offerings from fund administrators come in two flavors:

- **Full Service:** The “full service” fund administration Form PF offering will take data the administrator already has, combine it with additional data provided by the manager and other external sources, perform the aggregation, normalization, and calculation steps, and submit the completed filing.
- **Extract Only:** Alternatively, many fund administrators are choosing to provide only an extract of the data they have to their client. This extract can be combined with internal data or handed off to an external provider (e.g. 3rd party technology firm or data aggregator) to complete the filing.

### Technology Firms and Data Aggregators

Many software firms catering to hedge funds have expanded their products to address the requirements of Form PF. Again, the technology offerings fall into 2 categories:

- **Data Aggregation Tools:** Data aggregation tools typically take the form of a data warehouse which stores the relevant source data (trades, positions, prices, security information, classification categories, etc.) for each fund over time.
- **Workflow Tools:** Workflow tools provide a project management context around the compiling of source data and answering each question in the form. These tools allow specific questions or sections to be assigned to individuals, track completion progress, and maintain an audit trail with supporting detail behind each answer.

It is important to have a method for maintaining an audit trail and track the inputs and decisions that are used in each answer.

### Consulting Firms

Several consulting firms are now prepared to assist managers in creating a repeatable process for completing and filing Form PF. These projects will include the initial analysis to determine where each input can be sourced from, normalizing the data across the various sources, and establishing the steps for using the data to answer each question. Some consulting firms offer their own software-based workflow tools to help clients manage the process. Others have formed partnerships with technology firms/data aggregators. Consulting firms active in this space range from the traditional “Big 4” management consulting firms to boutiques that specialize in working with alternative investment managers.

## Case Studies

As illustrative examples, below are 3 case studies on fund managers of varying complexity and considerations.

	Simple	Medium Complexity	High Complexity
<b>Comingled Funds</b>			
Number of Funds and/or strategies	2	2	3
AUM (millions)	\$100	\$250	\$1,000
<b>Managed Accounts</b>			
Number of Accounts	0	1	5
AUM (millions)	\$ -	\$50	\$150
<b>Regulatory AUM (millions)</b>			
Long Market Value - Comingled Funds	\$200	\$500	\$2,000
Short Market Value - Comingled Funds	\$200	\$500	\$2,000
Borrow For Leverage - Comingled Funds	\$100	\$250	\$1,000
Long Market Value - Managed Accounts	\$ -	\$100	\$300
Short Market Value - Managed Accounts	\$ -	\$100	\$300
Borrow For Leverage - Managed Accounts	\$ -	\$50	\$150
<b>Total</b>	<b>\$500</b>	<b>\$1,500</b>	<b>\$5,750</b>
Number of Prime Brokers	2	3	3
Number of Fund Administrators	1	2	3
<b>Filing Requirements</b>			
Filing Frequency	Annually	Quarterly	Quarterly
Initial Filing Deadline	Q1 2013	Q1 2013	Q2 2012
<b>Strategy/Asset Classes</b>	US fundamental equity long/short	Global convertible bond arbitrage with CBs, equities, equity options, CDS	Global multi-strat; trades equities, credit, futures, fx, listed and OTC derivatives, bank debt
<b>Key Considerations</b>	<b>Note the impact of short balances and leverage on the RAUM calculation</b> <b>Must file Form PF since RAUM is greater than \$150K, even though AUM is only \$100K</b>	<b>Note the impact of short balances, leverage and managed account balances on RAUM</b> <b>Must file quarterly since RAUM is \$1.5b</b>	<b>Note the impact of short balances, leverage and managed account balances on RAUM</b> <b>Initial filing is 2012 since RAUM &gt; \$5b</b>
<b>Potential Approaches</b>	<b>If transaction volume is high, consider data warehouse-based solution</b> <b>If transaction volume is low, consider fund administrator or outsourced technology solution</b>	<b>With a single administrator for both the funds and the managed account, consider that particular administrator's Form PF offering, if available and compatible</b>	<b>Complexity from product mix plus multiple prime brokers and fund admins</b> <b>Consider a full solution with:</b> • <b>Advanced multi-use workflow</b> • <b>A robust data warehouse</b> • <b>Potential consulting engagement</b>
<b>Estimated Cost Range</b>	\$10,000 - \$50,000 (single annual filing)	\$40,000 - \$250,000 (annually)	\$250,000+ (one-time cost of warehouse installation and/or consulting engagement)

## **Service Provider Overview**

As the requirements and implications of Form PF become better understood, new participants are continuously entering the fledgling Form PF vendor/service provider industry, and their offerings are evolving. The data in the following service provider summaries is as of March 2012 and has been self-reported directly by the providers. Bank of America Merrill Lynch accepts no responsibility for any such data and cautions each investment manager to make proper inquiries of each vendor as to the accuracy of such information. The investment manager is reminded that it is ultimately responsible for timely and accurate completion of this filing.

## **Fund Administrators, Technology Providers, and Data Aggregators**

Topics to consider when evaluating a fund administrator, technology provider or data aggregator's Form PF offering:

- How similar is the advisor's strategy/size/complexity to other Form PF clients serviced by the administrator or provider?
- Will the solution accept and aggregate data provided by outside administrators?
- Can the solution perform risk calculations, or require the results to be provided?
- What people resources does the provider make available to help compile Form PF?
- What workflow tools are provided to track progress and manage assignment of questions/sections?
- Financial stability of the administrator or provider.

## **Consulting Firms**

Topics to consider when evaluating Consulting Firms:

- How similar is the advisor's strategy/size/complexity to the consulting firm's other Form PF clients?
- Does the firm have a Form PF-specific methodology?
- What is the level of experience of the proposed project team with Form PF and related topics?
- What systemized tools and/or calculators does the Consulting firm provide? and manage assignment of questions/sections?
- Ensure that the proposed Project Team is the team that comes to execute the project
- Look to reduce the risk of cost over-runs through fixed billing proposals

## **How Can Bank of America Merrill Lynch Hedge Fund Consulting Help?**

As you prepare for Form PF, the Bank of America Merrill Lynch Hedge Fund Consulting team can assist in a number of ways:

- Providing a framework and assistance with establishing a Form PF filing program
- Reviewing applicable vendor/service provider offerings in the marketplace
- Advising on best practices for sourcing and aggregating data

# Fund Administrators

## GlobeOp

<b>Contact Info</b>	Firm Contact/Lead Name	Tony Glickman
	Email Address	tglickma@globeop.com
	Phone #	+1.646.827.1834
	Address	156 W. 56th Street New York, NY 10019
<b>Data Sources</b>	Import data from external fund administrator	Yes
	List of administrators tested as of March 1	Most major administrators and many smaller ones
	Administrators planned for integration in 2012	
	Import data from prime broker or swap counter parties	Yes
	List of brokers tested as of March 1	Most major prime brokers and many smaller ones
	Brokers planned for integration in 2012	
	Import data from risk tool or external risk vendor	Yes
	List of risk tools tested as of March 1	GoRisk, RiskMetrics, MeasureRisk
	Risk tools planned for integration in 2012	Any recognized risk service
	Sources of pricing data	Reuters EJV, Reuters Datascope, Reuters Select Feed, Reuters LPC, Bloomberg BGN, Bloomberg BVAL, Markit, Fitch Solutions, CMA Datavision, IDC,Tullett, PricingDirect, RBS PriceSmart, Pluris, S&P, Houlihan Lokey,Super Derivatives
Allow export of data to client/external administrator/vendor	Yes	
<b>Data Input</b>	Spreadsheet-based data import supported	Yes
	Web-based input supported	Yes
	Proprietary, Enterprise system for data input	Yes
	Describe Other Data Input mechanisms (if any)	
	Single/multi-user front-end	Multi-User

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<b>AIS</b>	<b>SS&amp;C</b>	<b>SEI</b>
Scott Syracuse	Michael Megaw	SEI/James Cipriano
scott@aisgrp.com	mmegaw@sscinc.com	jcipriano@seic.com
201.708.9741	212.455.6333	610.676.1230
433 Hackensack Ave, Hackensack, NJ 07601	675 Third Avenue	Oaks, PA
N/A	Yes	Yes
N/A	Accepts data files from most sources	SEI admin clients – data loaded via predefined template (data warehouse)
N/A	Accepts data files from most sources	
N/A	Yes	Yes
N/A	Accepts data files from most sources	SEI admin clients – data loaded via predefined template (data warehouse)
N/A	Most major brokers supported	
N/A	Yes	Yes
N/A	Accepts data files from most sources	SEI admin clients – data loaded via predefined template (data warehouse)
N/A	Support for both SS&C proprietary risk system as well as most major external risk providers	
N/A	Most major pricing vendors	IDC, Bloomberg, Markit, Reuters, etc
Yes – provide data extract only	Yes	Yes
N/A	XML, Data Feeds	
N/A	Multi-User	Multi-User

# Fund Administrators

## GlobeOp

<b>Graphical Workflow and Reporting</b>	Web-based or local client	Web-based
	Permissioning to specific questions/sections	Yes
	Question level locking	Yes
	Progress reporting and tracking (e.g. Dashboard)	Yes
	Number of Pre-built Management Reports	58
	Ability to output Form PF in SEC type format	Yes
	Drill down from an answer to position/trade level detail	Yes
<b>Calculation Support</b>	Audit Trail with ability to modify supporting calculations	Yes
	Regulatory AUM	Yes
	Calculate "turnover" values based on transaction data	Yes
	Calculate "portfolio liquidity" based on transaction and market data	Yes
	Calculate VaR	Yes
	Calculate Scenarios	Yes
	Describe other calculations supported	
<b>Technical Infrastructure</b>	Hosted, Software as Service or Installed Infrastructure	Hosted/SaaS
	Underlying database technology	Sybase + Cognos
	Separate regulatory database	Yes
	Multi-tenant or separate instance for each client	Yes
	Customizable front-end	Yes
	Open reporting for generating ad-hoc reports	No
<b>Resources</b>	Number of staff members dedicated to Form PF support	12
	Technical support for 3rd party integration	3
	CFA/Accountant	4
	Legal/regulatory advisory	3
	Project consulting	2
<b>Cost/Pricing Model</b>	Per Filing	customized for client depending on style, number of funds, and counterparties
	BPS on AUM	
	Project Fee based	
	Describe any other cost drivers/levers	Risk data, funds and counterparties

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<b>AIS</b>	<b>SS&amp;C</b>	<b>SEI</b>
N/A	Web-based	Web-based
N/A	Yes	Yes
N/A	Yes	Yes
N/A	Yes	Yes
N/A	10+ reports and dashboards	TBD
N/A	Yes	Yes
N/A	Yes	Yes
N/A	Yes	Yes
N/A	Yes	No
N/A	Yes	Yes
N/A	Yes	No
N/A	Yes	Yes
N/A	Yes	Yes
N/A	Duration, WAT, net/gross performance	Ability to use manager preferred or SEI calculations
N/A	Hosted/SaaS	Hosted/SaaS
N/A	SQL Server	SQL Server
N/A	Yes	No
N/A	Yes	Yes
N/A	Yes	Yes
N/A	Yes	Yes
N/A	Not supplied in detail. Over 25.	Filing status/Client specific
N/A		Filing status/Client specific
N/A	Not supplied	TBD
N/A		TBD
N/A		TBD
N/A		TBD

# Technology Firms and Data Aggregators

		<b>MIK Fund Solutions</b>	<b>ConceptONE</b>
<b>Contact Info</b>	Firm Contact/Lead Name	Marshall Saffer	Dan Connell
	Email Address	msaffer@mikfs.com	dan@conceptonellc.com
	Phone #	212.468.2002	646.840.4996
	Address	1633 Broadway 28th Floor New York, NY 10019	527 Madison Avenue New York, NY 10022
<b>Data Sources</b>	Import data from external fund administrator	Yes	No
	List of administrators tested as of March 1		
	Administrators planned for integration in 2012		We have taken data for existing reporting services from the majority of Fund Administrators to date
	Import data from prime broker or swap counter parties	Yes	Yes
	List of brokers tested as of March 1		We have taken data for existing reporting services from the majority of Prime Brokers to date
	Brokers planned for integration in 2012		
	Import data from risk tool or external risk vendor	Yes	No
	List of risk tools tested as of March 1		
	Risk tools planned for integration in 2012		
	Sources of pricing data	Most Sources	
Allow export of data to client/external administrator/vendor	Yes	Yes	
<b>Data Input</b>	Spreadsheet-based data import supported	Yes	Yes
	Web-based input supported	Yes	Yes
	Proprietary, Enterprise system for data input	Yes	Yes
	Describe Other Data Input mechanisms (if any)		
	Single/multi-user front-end	Multi-User	Multi-User

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# Technology Firms and Data Aggregators

Hazel Tree	Indus Valley Partners	Advise Technologies
Stephen Casner	Gurvinder Singh	Doug Schwenk
scasner@hazeltree.com	sales@ivp.in	doug.schwenk@advisetechologies.com
646.837.9450	+1 201.984.1045	646.657.8406
150 W. 30th St., 18th floor, NY 10001	1350 Broadway, Suite 601, New York, NY 10018, USA	10 E 39th St Suite 925-D, New York, NY 10016
Yes		Yes
Morgan Stanley Fund Services	Citco, Statestreet, GlobeOps, Lacrosse	7
GlobeOp, Citco, DB Fund Svcs, BNP	MSFS, Hedgeserv/NT	Approx 35
Yes	Yes	Yes
MS, GS, JPM, CS, UBS, DB, Bar, Citi, Fid, BAML, BNP	MS, GS, DB, CS, BoA, ML, Fidelity	5
Any ISDA counterparty	MSFS, Hedgeserv, NT	Approx 15
Yes	Yes	Yes
Algorithmics	Risk Metrics, Imagine, Front Arena, R2	4
Imagine, Risk Metrics, MSCI		Approx 8
Bloomberg, SunGard	Bloomberg, Reuters, Factset, IDC,Markit, Adaptor Tool available to on-board others	3
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	No	Yes
Direct import from HazelTree datastore		XML, CSV, ETL, API, Link to Spreadsheet, Custom
Multi-User	Multi-User	Multi-User

# Technology Firms and Data Aggregators

		<b>MIK Fund Solutions</b>	<b>ConceptONE</b>
<b>Graphical Workflow and Reporting</b>	Web-based or local client	Web-based	Other
	Permissioning to specific questions/sections	Yes	Yes
	Question level locking	Yes	Yes
	Progress reporting and tracking (e.g. Dashboard)	Yes	Yes
	Number of Pre-built Management Reports		Yes
	Ability to output Form PF in SEC type format	Yes	Yes
	Drill down from an answer to position/trade level detail	Yes	Yes
<b>Calculation Support</b>	Audit Trail with ability to modify supporting calculations	Yes	Yes
	Regulatory AUM	Yes	No
	Calculate "turnover" values based on transaction data	Yes	Yes
	Calculate "portfolio liquidity" based on transaction and market data	Yes	Yes
	Calculate VaR	No	Yes
	Calculate Scenarios	No	Yes
	Describe other calculations supported		Client specific calculations depending on pricing policies of a given client; complete aggregation
<b>Technical Infrastructure</b>	Hosted, Software as Service or Installed Infrastructure	Local Installation	Both
	Underlying database technology	SQL	MS SQL Server
	Separate regulatory database	Yes	Yes
	Multi-tenant or separate instance for each client	Yes	Yes
	Customizable front-end	Yes	Yes
	Open reporting for generating ad-hoc reports	Yes	Yes

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# Technology Firms and Data Aggregators

Hazel Tree	Indus Valley Partners	Advise Technologies
Other	Web-based	Both
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
2	10	11
Yes	Yes	Yes
No	Yes	Yes
Yes	Yes	Yes
Yes	No	Yes
Yes	Yes	Yes
Yes	Yes	Yes
No	No	No
No	No	No
Duration, security level ratios	Ability to import	All others in Form PF
Both	Local Installation	Local Installation
Microsoft SQL server	SQL	SQL-Server or Oracle
Yes	No	Yes
Yes	No	Yes
No	Yes	Yes
Yes	Yes	Yes

# Technology Firms and Data Aggregators

		<b>MIK Fund Solutions</b>	<b>ConceptONE</b>
<b>Resources</b>	Number of staff members dedicated to Form PF support	4 developers for just Form PF experience	35+
	Technical support for 3rd party integration	47 developers	10
	CFA/Accountant		10
	Legal/regulatory advisory		10
	Project consulting	1 project lead dedicated	5
<b>Cost/Pricing Model</b>	Per Filing	n/a	25,000-100,000
	BPS on AUM	n/a	flexible
	Project Fee based	Time and Material cost for implementation	yes
	Describe any other cost drivers/levers	Have to Install the warehouse	Deployed or hosted; quality of data; number of assumptions and other custom calculations; number of data sources

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# Technology Firms and Data Aggregators

Hazel Tree	Indus Valley Partners	Advise Technologies
20	10	27
15	5	12
1	0	2
0	0	4
4	5	3
No Cost per filing		\$0
Costs are not based on AUM		\$0
Monthly Fee based on counterparties & users		In Some Cases
Standalone vs. multi user system	Annual (25-40K) depending on sections applicable	Per Install

# Consulting Firms

## WTP Advisors

<b>Contact Info</b>	Firm Contact/Lead Name	Ilicia Silverman
	Email Address	ilicia.silverman@wtpadvisors.com
	Phone #	914.733.3362 or 917.655.0051
	Address	One North Broadway, White Plains, NY 10601
<b>Deliverables</b>	Form PF Project Methodology	Yes

Analysis of required data inputs and sources for each section/question	Leveraging our subject matter expertise, we provide full data discovery and analysis for each question on the form. This includes: identifying the sources, normalizing and aggregating the data (including performing additional calculations if required) and full mapping into the appropriate sections/questions.
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Form PF specific “mini tools” to accelerate and support progress	“Mini tools” include: a customizable user dashboard, comprehensive review and approval workflow management, full audit trail and reporting, customizable security settings, ability to attach and store supporting documentation, a comprehensive calculation engine for form requirements, and an enterprise scale ETL component for data mapping.
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Filing/submission to SEC via PFRA	We support full XML integration for automated upload/filing capabilities to the SEC.
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Gravitas	Sindex Financial Systems	Deloitte
Timothy Hamel	Michael Schully	Karl Ehram
thamel@gravitastechnology.com	mscully@sindexsystems.com	kehrsam@deloitte.com
212.607.8243	646.291.6163	212.436.3153
Gravitas BCS first defines the firm's initiative based on specific form requirements, assigning responsibilities to a working group. Once established, a formal project plan is written to organize data mapping and aggregation.	Sindex's staff has taken its project management methodology used for complex data-driven initiatives, such as portfolio management systems, security master, order management systems, data warehouse and reporting implementations, and customized it for adaption to Form PF needs.	1 WFC, New York, NY 10281  Deloitte breaks down projects into four basic phases: Requirements Analysis, Gap Assessment, Solution Design, and Implementation. The method ultimately chosen depends largely on client need and goals, particularly if they are seeking a more strategic solution that addresses challenges related not only to Form PF, but also to provide consistency of data with other data and reporting needs (e.g., Form ADV, international large position disclosure, 13F/G reporting, marketing, client transparency reporting)
Gravitas BCS gap analysis focuses on making connections between disparate data and a final, reportable product. Mapping each section through staging tables for calculations and importing allows for a reliable, automatable filing process.	Sindex has reviewed, organized and documented the more than seventeen hundred data elements that are included in preparing the Form PF filing.	Deloitte will work with your legal counsel to perform an analysis of data inputs that are available from existing client systems and those that will need to be enriched from outside or other sources.
Formal workflow and initiative, an electronic Form PF filing application (third party), assistance with form calculations.	Sindex can either leverage systems the client has in place for calculating derived numbers (performance, VaR, etc), or can utilize its own tools where the client may not have the capability in-house.	We will utilize our Gap Assessment Template, Solution Assessment Framework, Planning and Data Analytics Tools, and Operating Model templates to accelerate progress with Form PF.
Gravitas currently works with industry leading technology providers who have produced electronic filing applications. Gravitas BCS will see the client through the electronic process once it is completely defined by the SEC.	There are multiple software offerings in the market place designed to take finalized data input and format the filing to SEC specifications; we can assist in the selection and implementation of an appropriate tool from the market place if the client has not done so already.	Deloitte will not file Form PF on behalf of a client, but will work closely with our clients to develop process- and technology-oriented solutions that will create repeatable and predictable outputs for Form PF.

## WTP Advisors

### Services

Project Management

End to end project management from hardware and software set up, data discovery analysis and preparation, data integration and automation, process consulting, filing support services and compliance support services. There is a complete solution knowledge transfer so client can be self-sufficient post project.

Subject matter experts (legal, CPA, CFA, etc.)

Subject matter expertise for all aspects of the engagement including certified software professionals, former hedge fund COOs and CFOs, CPAs, CFAs, MBAs and former CCOs and legal counsel.

Staff Augmentation

Comprehensive project resources as well as staff augmentation during and post-project are available. You have complete access to our consulting business including our outsourced COO/CFO business team of experienced operational and financial experts as well as compliance consultants, legal professionals and a technology support team.

Cost structure

Rates and references available upon request.

The data in the above service provider summaries is as of March 2012 and has been self-reported directly by the providers. Bank of America Merrill Lynch accepts no responsibility for any such data and cautions each investment manager to make proper inquiries of each vendor as to the accuracy of such information.

Gravitas	Sindex Financial Systems	Deloitte
On and off site project management team.	Sindex's staff has an average of 15 years of financial industry experience, include project management of complex data-driven initiatives, such as portfolio management systems implementations, data warehouse and reporting implementations, etc.	We can manage the overall Form PF project effort, from requirements through implementation (for non-attest client relationships).
Gravitas Managing Director Mark Seaman is responsible for providing high end business consulting services with respect to software platform integration and best .business practices for front, middle and back office operational workflow	With our long term hedge fund consulting practice, we have expertise on all the data components that make up the form PF, whether it be shareholder data, performance, portfolio accounting, security master, risk, derivatives or leverage.	Deloitte's regulatory consulting resources and experience are global and span the alternative investments industry, including private equity funds, hedge funds and industry service providers. We bring regulatory reporting methodologies and leading practice insight to the challenges of new regulatory reporting requirements, such as Form PF.
Timothy Hamel is responsible for business consulting regarding Form PF.	Our staff's expertise in automation and reconciliation can help reduce the need for staff augmentation; we do not provide the service ourselves, but our experience in documentation and training can help you leverage the temporary workforce more efficiently if needed.	Deloitte can provide resources of varying skill sets to address the individual needs of each of our clients, whether regulatory, technology, industry, or other required resources.
Project undertaken on T&M, fixed cost and capped basis as determined by engagement. Typical fee range is between \$100-\$350/Hour based on level of consultant.	Sindex bills at an hourly rate and will work with clients to control cost with careful resource planning.	We charge on a time and materials basis as estimated for each client engagement.

## Contact Us

For information relating to the content within this guide, or any other areas for which you require assistance, please contact the Hedge Fund Consulting Team at Bank of America Merrill Lynch. Our contact details are below – we look forward to hearing from you.

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