BNP PARIBAS | CORPORATE & INVESTMENT BANKING

Realignment of Interest in Hedge Fund Investing

How can managed accounts effectively address institutional investor concerns?

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Innocap at a Glance

Innocap as of October 31, 2010

Ownership : Partnership between National Bank of Canada (75%) and BNP Paribas (25%)

AUM : USD 2 billions

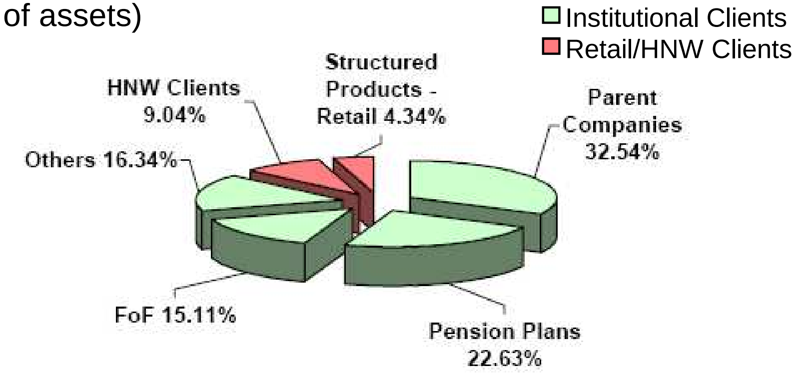
Employees

58 employees in total

- Innocap and BNPP representatives: 34
- Consultants: 4
- NBC Support: 20

A Strong Institutional Base

(87% of assets)



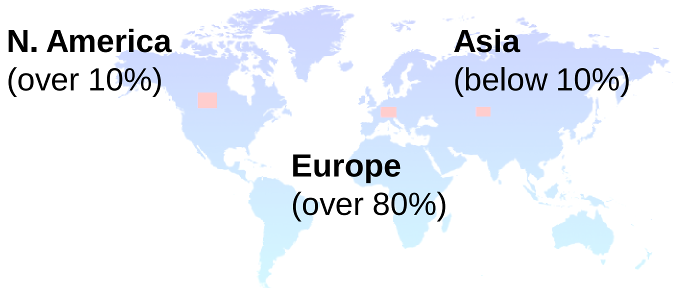
Others refers to Bank-Insurance companies, Foundations, Family Offices.

Innocap's Key Advantages

- Longest running Managed Accounts platform – since 1996
- Asset base not dominated by structured products
- SAS 70 Certification – world's first and only platform with certification for NAV determination process
- Official NAV at T+1
- Open architecture
- Transparent fee structure
- No hidden conflicts of interest
- Asset and structure located on shore as European Funds

We have clients all over the world

Client Assets (%) by geography:

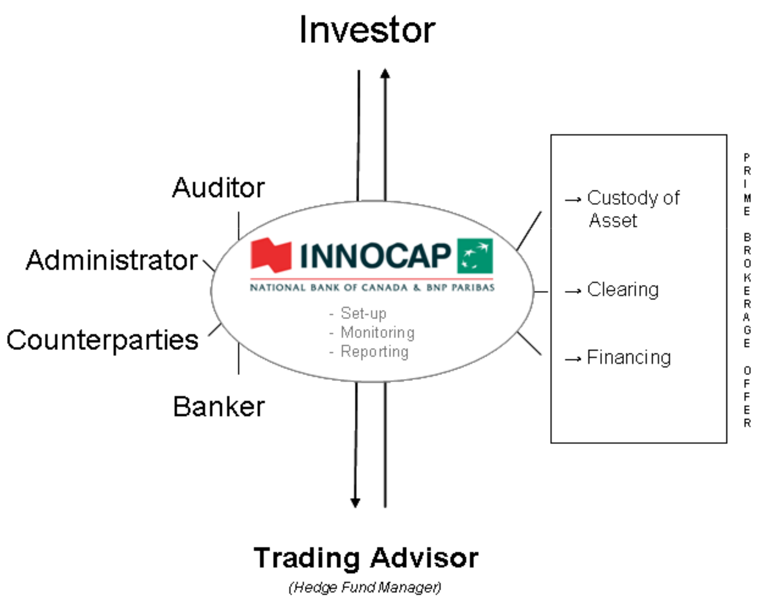


103 clients worldwide

The Benefits of Managed Accounts

Definition of a Managed Account:

An account for which the holder gives his/her trading advisor or someone else the authority to buy and sell securities, either absolutely or subject to certain guidelines and risk limits.



Pillars of Sound Hedge Fund Investing

✓ Obtain a better alignment of interest between Investors and hedge fund managers

- ➢Corporate governance and risk oversight is separated from the trading activity

✓ Obtain greater transparency and control of the assets

- ➢These two go hand in hand

✓ Effective Risk Management goes beyond Risk Measurement

- ➢The power to act, if required, is critical.

Myths and misconceptions of Managed Accounts

« MA may come with added responsibilities for trustees »

- From that point of view, information management and reporting is also a key issue.
- Good MA platforms can handle thousands of daily transactions and make sense of it by allowing daily valuations and compliance reports.

«MA HFs often exhibit a negative performance gap relative to the traditional « flagship » fund »

- We need to compare apples with apples.
- Such tracking error can be explained by:
  - Differences in investment objectives/mandates.
  - Differences in management and performance fees.
  - MA HF operators may have to intervene for risk management purposes.
  - Differences in cash management.
  - Impact of more frequent subscriptions/redemptions.

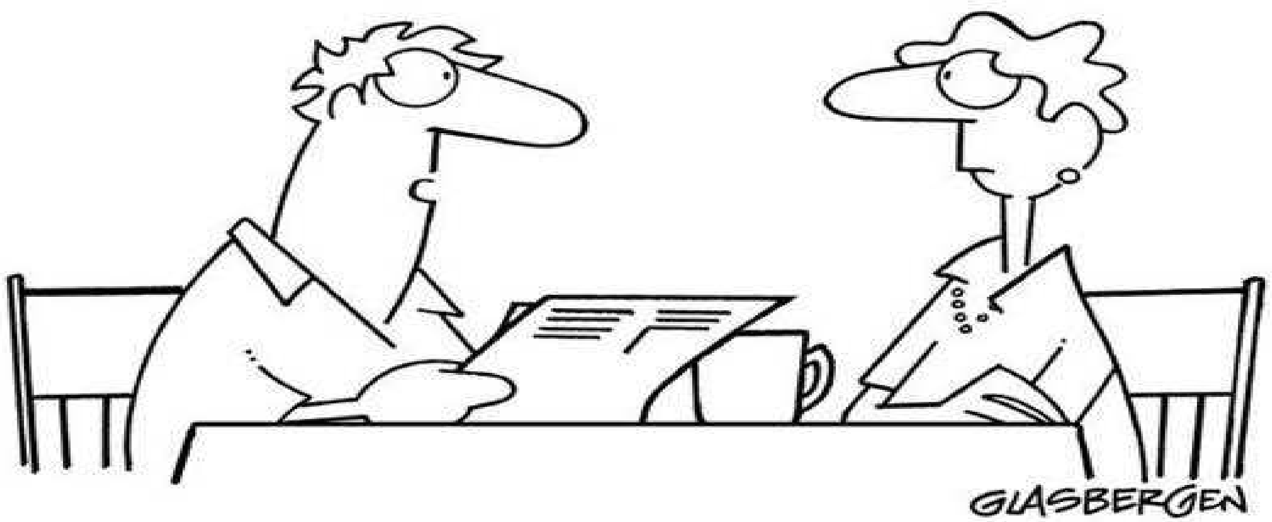
Myths and misconceptions of Managed Accounts

***«MA HFs often exhibit more volatility than the traditional « flagship » fund »*.**

- Again, we need to compare apples with apples.
- It is now well known that the returns of more illiquid investments (often the case of the flagship HF) are smoothed and thus exhibit a seemingly lower volatility.
- When one adjusts for the degree of illiquidity, more illiquid flagship HF volatility turns out to be substantially higher than it first seems.

« MA HFs may not constitute a panacea, as even Madoff had MAs »

- This highlights the importance of asset control when one looks at different MA structures.
- The ability to select and work with independant prime brokers and custodians also is a key element.



"Liquidity. That's when you look at your investments and wet your pants."

Definition

Liquidity: time needed to get your money back at a given price

Quiz

A Hedge Fund manager operates a very liquid strategy.

The fund offers quarterly liquidity with 10 days notice,
with 1% management fee / 20% performance fee.

Investors complain that such a liquid portfolio of assets
should be offered with better redemption terms.

The manager therefore decides to offer a new, more expensive
share class which has monthly liquidity with 10 days notice.

WHAT DO YOU BELIEVE PRICING SHOULD BE ON THE NEW MONTHLY SHARE CLASS?

Quiz

Another way to look at the question is :

At what difference in the fixed management fees

would you be indifferent between the two situations?

Management fee for new monthly share class should be :

A) 1.25% (+25bp)

B) 1.50% (+50bp)

C) 1.75% (+75bp)

D) 2.00% (+100bp)

E) Greater than 2.00%

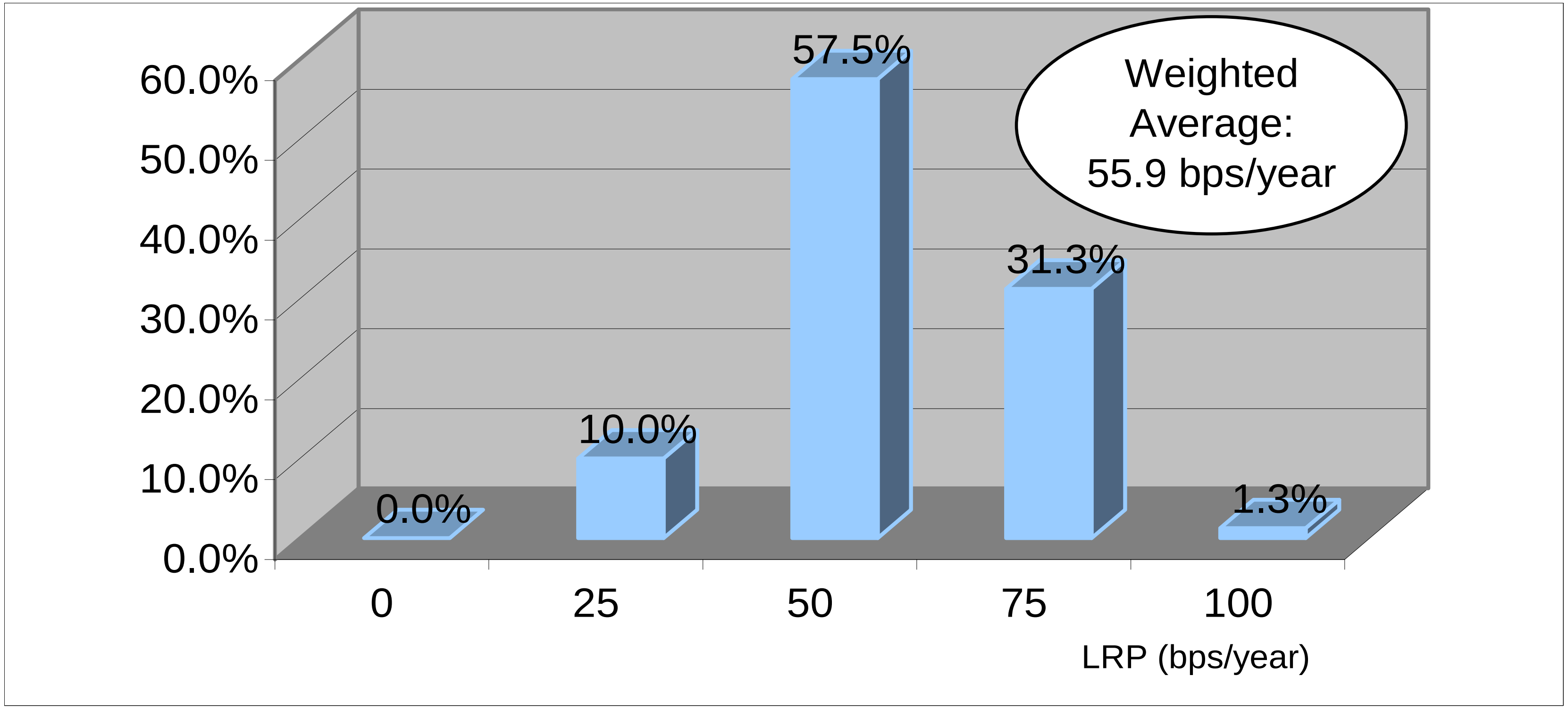
F) I am indifferent, both should charge the same fee

G) I do not understand what you are talking about & would rather be sleeping

Quiz

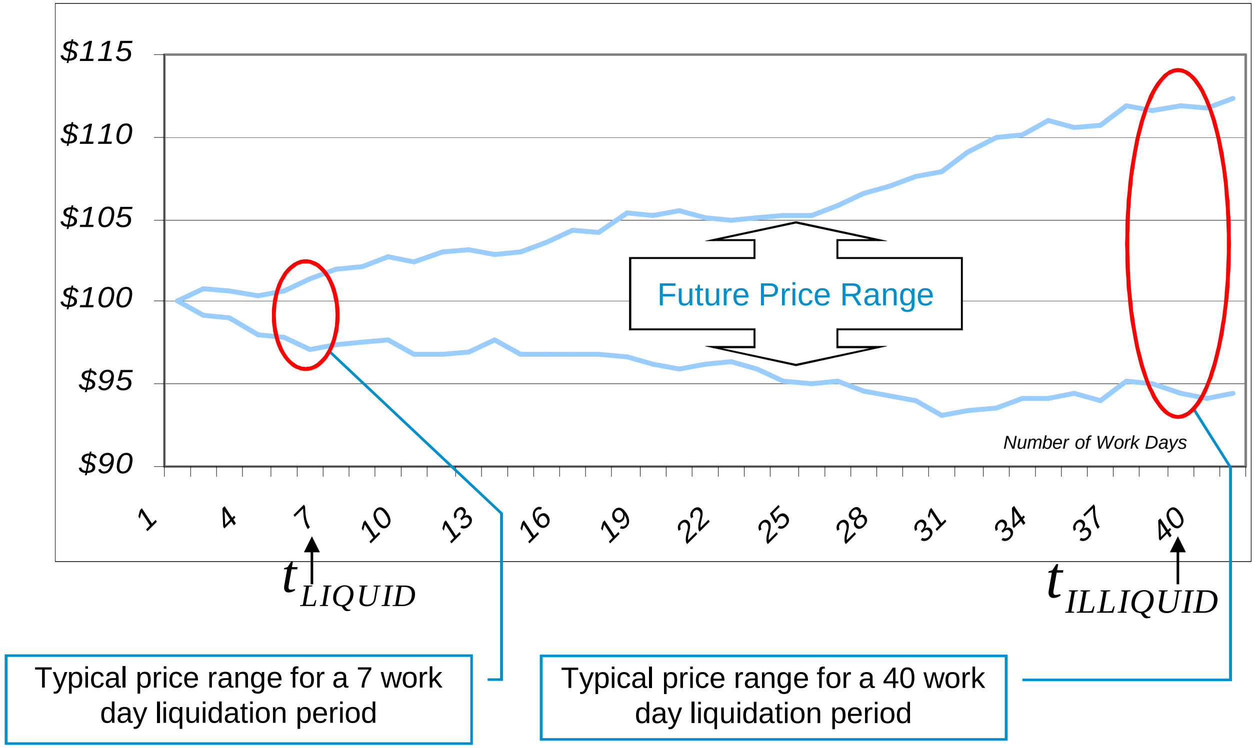
We asked this question to about 100 typical European institutional HF investors.

Here are the results of our survey :



The value of liquidity from the investors perspective

- This is the case of two portfolios of HFs containing the same HFs, but one portfolio has a longer liquidation delay (e.g. quarterly –vs- monthly liquidity). The present value of the illiquid fund (which is liquidated later) remains the same, but price uncertainty grows with time.



If we require the two portfolios to generate the same Sharpe Ratio, then the Liquidity Risk Premium (LRP) is:

$$LRP = Exc.Ret.\left(\frac{\sigma_{ILLIQ.}}{\sigma_{LIQ.}} - 1\right)$$

For FoHFs, the typical gross excess return is *circa* 4%/yr, the unadjusted volatility is around 6%/yr and the illiquidity-adjusted volatility can easily be 8%/yr. In that case, applying the above formula gives an estimated LRP of 1.33%/yr.

As it is the case of the « usual » market risk, investors sould always compare liquidity-risk adjusted returns no matter their thirst for liquidity.

The value of transparency and asset control

The value of Transparency and Asset Control:

➢Transparency allows:
- MA FoHF managers to better identify the troubled HFs.

➢Asset control allows:
- To reduce fraud risk.
  - To transfer the cash out of a troubled prime broker to another one in better shape.

How much is that worth*?

If we look back at the HF fraud history, we can justify at least 30 bp/year.

*Estimated Value of alleged investor losses due to hedge fund fraud. Source: www.HedgeTracker.com: Hedge Fund Hall of Fraud, as of July 2009. While www.HedgeTracker.com makes a reasonable effort to verify each entry by using credible sources, such as the Securities & Exchange Commission and the U.S. Commodity Futures Trading Commission, Innocap Investment Management, BNP Paribas and the website cannot be held liable for erroneous entries.

Year	Alleged fraud amount ($ Mn)	Estimated HF total AuM ($Bn)	Alleged fraud amount as a % of total HF AuM
1994	$0	$99	0.00%
1995	$0	$76	0.00%
1996	$0	$97	0.00%
1997	$0	$130	0.00%
1998	$0	$210	0.00%
1999	$0	$221	0.00%
2000	$393	$324	0.12%
2001	$0	$408	0.00%
2002	$346	$564	0.06%
2003	$200	$592	0.03%
2004	$73	$795	0.01%
2005	$611	$1009	0.06%
2006	$216	$1223	0.02%
2007	$381	$2000	0.02%
2008	$69502	$1800	3.86%
2009	$13926	$1500	0.93%
AVERAGE:			32 bps/year

Case study #1

Independent Valuation: Beacon Hill case study

Beacon Hill's collapse

The manager invested in mortgage backed securities with a total AUM of $2 billion in 3 managed accounts

Innocap was independently computing Beacon Hill's Net Asset Value

	Returns calculated by Innocap	Returns communicated by Beacon Hill
August 1999	-0.91%	2.39%
September 1999	-1.41%	3.54%
October 1999	-1.82%	2.82%
November 1999	-0.03%	2.73%

On December 15, 1999, following recurrent and significant differences in monthly returns, Innocap closed its managed account a few months after initial investment.

As the value of Beacon Hill's hedge funds decreased in the summer of 2002, the manager increasingly inflated the prices of the securities to maintain the appearance of positive returns.

- At the same time, contrary to what it was telling investors, Beacon Hill made an increasing and ultimately unsuccessful bet on interest rates rising in an attempt to cover its hidden losses.

On October 17, 2002, Beacon Hill announced much larger investor losses, admitting that, as of September 30, the Net Asset Values of its hedge funds had declined 54% from previously reported August 31, 2002 levels, and further acknowledging that it had mis-priced securities throughout the years.

- Soon after, Beacon Hill funds collapsed and investors lose more than $300 million

Case study #2

Focus on risk monitoring: Vega case study

Vega

- Short US bonds during summer of 2006; short position increasing
- Bond prices increased during fall 2006
- Vega covers its short positions and realizes losses

Innocap's assets

- End July: Vega reaches VaR allocated; addressed to manager who reduces positions
- Oct 1st 2006: Major reduction in allocation to manager

Other investors exposure continue rising during summer 2006

From July 1st to October 31st, Innocap lost 12%, investors in the offshore comingled vehicle 18.5%

Case study #3
Counterparty risk: Lehman Brothers

Lehman Failure

September 2008, Lehman Brothers files for bankruptcy becoming one of the largest and most high-profile casualties of the credit crisis.

Managed Account - Innocap
Managed accounts can offer more control over service provider choice than a flagship hedge fund. An example of counterparty risk mitigation exercised by Innocap in the Lehman case:

- ✓ **Internal risk models** in managed accounts showed a deterioration of the Lehman credit risk in March 2008
- ✓ **Exposures were reduced** to the counterparty
- ✓ **Daily monitoring** and management of excess margin and collateral
- ✓ Following the bankruptcy, investors suffered a **minimal loss** of less than 75bps in one managed account (600k loss for a 90Mn book). Investor in the Offshore Fund suffered from triple digit losses (bps)

Investors in the Flagship Hedge Fund

- ✗ Exposures remained at a normal level throughout 2008
- ✗ Potential double digit losses

Case study #3

Counterparty risk: Lehman Brothers

Exposure of a trading advisor on March 3, 2008				
Counterparty	Mark to market exposure	Mark to market limit	Internal rating probability of default	External rating
Goldman Sachs	$25,899,929	$5,000,000	3.88%	AA-
JP Morgan Chase	$-624,543	$5,000,000	0.40%	AA-
Lehman Brothers	$0	$5,000,000	26.79%	A+
Merrill Lynch	$16,538,498	$5,000,000	16.19%	A+
Morgan Stanley	$6,216,838	$5,000,000	15.29%	AA-

Total mark-to-market exposure of $48.7 million represents money at risk in case of default

- Total manager AUM is $200 million

Internal credit model is showing moderate probability of default for Lehman Brothers, Merrill Lynch and Morgan Stanley

- The manager is told not to enter in any transactions with Lehman Brothers and to reduce its exposure to Merrill Lynch

Counterparty risk: A real-life example

Merrill Lynch's exposure is reduced in the following weeks and so is Morgan Stanley's and Goldman Sachs' exposure

Exposure of a trading advisor on September 5, 2008

Counterparty	Mark to market exposure	Mark to market limit	Internal rating probability of default	External rating
Goldman Sachs	$7,628,893	$5,000,000	1.93%	AA-
JP Morgan Chase	$-167,269	$5,000,000	0.11%	AA-
Lehman Brothers	$0	$5,000,000	44.41%	A
Merrill Lynch	$-142,965	$5,000,000	33.89%	A
Morgan Stanley	$-569,657	$5,000,000	9.63%	A+

Internal ratings are showing more deterioration in counterparties credit quality

On September 15, 2008, Lehman Brothers files for bankruptcy and Bank of America buys distressed Merrill Lynch

On September 22, 2008, Morgan Stanley and Goldman Sachs abandon investment bank status

Case study #4
Madoff ponzi scheme

Definition of a Managed Account:

An account for which the holder gives his/her trading advisor or someone else the authority to buy and sell securities, either absolutely or subject to certain guidelines and risk limits.

- Confusion between feeder fund & Managed Account
- Madoff was structured as a Broker/Dealer and not as an Investment Advisor

- Innocap enquired doing a Managed account with Madoff
  - 2 requirements:
    1- Trading exclusively with Madoff securities
    2- Madoff securities had to be sole custodian!!

- **Those requirements did not meet the basic Operational Due Diligence requirements of Innocap**

- ✓ The control of the assets and cash lies exclusively with the Investment Manager and the Administrator, never with the trading advisors.
- ✓ Independence of the services providers within the manage account is key in mitigating the fraud risk.

Case study #5

Focus on business model : PlusFunds caught in Refco riptide

PlusFunds operated a Managed account platform

Partnership with Refco

Refco, October 2005: Liquidity within its non-regulated subsidiary, Refco Capital Management, which represents a material portion of the business of the Company, was no longer sufficient to continue operations.

Independence and regulation of the services providers within the manage account is key in mitigating the fraud risk.

Thorough process for establishing a new service provider must be in place:

- Specific and exhaustive Due Diligence
- Credit and legal analysis
- Approval from Independent members of the Board
- Approval from independent regulatory bodie(s) within the respective jurisdiction
- Solid legal agreements with service providers

Case study #5

Focus on business model : PlusFunds caught in Refco riptide

Innocap:

Innocap focuses on Cash Control: The control of the assets and cash lies exclusively with the Investment Manager and the Administrator, never with the trading advisors.

- No unnecessary cash balances are left at the PB's/custodians and all balances within the platform are tracked and analysed on a daily basis

Only top-tier service providers with strong balance sheets and good credit ratings should be considered within a platform.

Managed Account Hedge Funds’ Tracking Error

A recent Innocap study shows that the managed account hedge funds (MAHF) tracking error (TE) does not mean underperformance on a risk-adjusted basis.

A good knowledge of how MAHFs differ from offshore HFs points toward eleven factors that contribute to MAHFs’ TE:

Differences in investments mandates

Differences in the fee structures

Differences in cash management

Risk management motivated actions by the MA platform operator

Difference in valuations between the offshore fund and the MAHF

Frauds

Presence of more illiquid assets in offshore funds

Entry point

More frequent subscriptions and redemptions for MAHFs

Smaller average size of the MAHF

Strategy changes not implemented at the same time in the MAHF and the offshore fund

Managed Account Platform: What to look for?

Core concepts that need to be considered

- ✓ Open architecture
- ✓ Transparent fee structure
- ✓ No hidden conflicts of interest
- ✓ Longevity of the platform
- ✓ Operational effectiveness: SAS 70 Certification
- ✓ Ownership structure
- ✓ Official Daily NAV
- ✓ No liquidity enhancement
- ✓ Legal Structure and jurisdiction of the platform
- ✓ Quality of Service Providers
- ✓ Solid and proven risk management
- ✓ Experienced legal staff negotiating agreements (prime brokerage, ISDA, IMA…) and implementing optimal structures
- ✓ Research team pushing innovation
- ✓ Tracking error between the Managed Account and the Offshore Fund

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