Advanced Fund Accounting

M S Chandrashekar

B G Shivakumar

Fund Administration Leaders Program

Agenda

- Performance Fee and the need for High Water Mark
- Hurdle Rate
- Equalization
- Mutual Fund Performance Measures
- PMS
- Private Equity/Venture Capital

Fund Administration
Leaders Program
FLP

Certain Complexities With Performance Fee

Fund Administration
Leaders Program

FLP

Question

- As performance fee, a fund charges you 10% of all profits earned
- You invest Rs 100 in the fund

Q1

- In the first three months, your investment does well and its values soars to Rs 120
- As agreed, you pay Rs 2 as performance fee to the fund

Q2

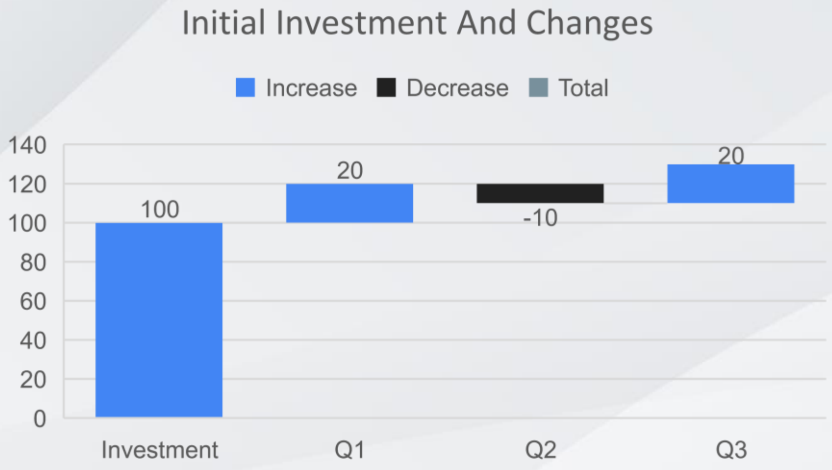
- In the subsequent three months, the investment does not do so well and its value falls to 110
- Understandably, you are not required to pay a performance fee for Q2

Q3

- In the third quarter, your investment does well again and it soars to Rs 130
- Question – how much performance fee do you owe the fund manager in Q3
- Please take 2 minutes to think about this before you answer

Analysis

- From inception to Q3, the investor has made a net gain of Rs 30.
- The total performance fee charged during this entire period should be 10% of 30 = Rs 3
- ……but performance fee is charged on a quarterly basis and one could end up collecting Rs 4 if the performance fee is applied without sufficient thought



High Water Mark

- Using the High Water Mark framework resolves this issue
- Going from inception to the end of Q1, in the above illustration, HWM is set as the higher of the investment value at inception and the value at the end of Q1. At the end of Q1, therefore, HWM is set at 120.
- Going from Q1 to Q2, HWM is now reset as the higher of the current HWM (which is Rs 120) or the current value of the investment. The HWM therefore remains at 120
- Going from Q2 to Q3, HWM is now reset as the higher of the current HWM (which is Rs 120) or the current value of the investment. The HWM therefore is reset to Rs 130
- This ensures that performance fee is only paid on net gains for a given period

Complications

Please take a few minutes to consider the following complications

- In the given illustration, what if an investor would like to invest at the end of Q2? The investment is made when the current value of the portfolio is 110 while the HWM is 120.
- More specifically, how much does this new investor pay at the end of Q3? Re 1 or Rs 2?

- What if an investor wants to withdraw at the end of Q2?

SEBI on HWM

SEBI circular dated 5/Oct/2010

High Water Mark Principle: High Water Mark shall be the highest value that the portfolio/account has reached. Value of the portfolio for computation of high watermark shall be taken to be the value on the date when performance fees are charged. For the purpose of charging performance fee, the frequency shall not be less than quarterly. The portfolio manager shall charge performance based fee only on increase in portfolio value in excess of the previously achieved high water mark.

SEBI on HWM

Illustrative example

Illustration: Consider that frequency of charging of performance fees is annual. A client's initial contribution is Rs.10,00,000, which then rises to Rs.12,00,000 in its first year; a performance fee/ profit sharing would be payable on the Rs.2,00,000 return. In the next year the portfolio value drops to Rs.11,00,000 hence no performance fee would be payable. If in the third year the Portfolio rises to Rs.13,00,000, a performance fee/profit sharing would be payable only on the Rs1,00,000 profit which is portfolio value in excess of the previously achieved high water mark of Rs.12,00,000, rather than on the full return during that year from Rs.11,00,000 to Rs.13,00,000.

SEBI on HWM

Note that SEBI's circular does clarify on interim contributions and withdrawals

c) High Water Mark shall be applicable for discretionary and non-discretionary services and not for advisory services.

d) In case of interim contributions/ withdrawals by clients, performance fees may be charged after appropriately adjusting the high water mark on proportionate basis.

- In many fund structures (mutual funds most notably), the fee charged by a fund manager is a fixed fee (usually a percentage of the AUM)
- In other fund structures (notably PE/VC and hedge funds), the fee also includes a component which is linked to performance. In the example, this component is set at 15% of any returns in excess of 9%

Abakkus All Cap Approach PMS

(4 of 4 slides)

HDFC securities — Click. Invest. Grow. — 20 YEARS

Fund Manager: Sunil Singhania	Sunil Singhania, a CA rank and CFA charter holder, is a reputed name in Indian equities. He last served as CIO-Equities for Reliance Mutual Fund, where he oversaw over $ 1 billion of equity assets. Sunil is regarded as one of the top Equity Fund Managers in the country (rated best Fund Manager by Outlook Business in 2016 and 2017 over 10 year time frame). He is the first Indian to be appointed on the Global Board of CFA Institute, USA. Currently Honorary Chairman of Investment Committee of CFA Institute. Sunil is currently on the IFRS Capital Markets Advisory Committee (CMAC) and the only member from India to be appointed for the same (2020 - 2023)

Portfolio Manager	Sunil Singhania / Aman Chowhan			
Benchmark	S&P BSE 200			
Investment Tenure	Open ended PMS with investment horizon of more than 3 years			
Minimum Initial Investment Amount	Rs 50 lacs			
Minimum Add-on Investment Amount	Rs 5 lacs			
NRI Eligibility	NRIs can invest on a case to case basis and in consultation with fund house US and Canada based NRIs are not allowed to invest			
Annual Management Fee	**Fixed Fee only**		**Fixed + Performance Fee**	
	Amount	**Fixed Fees**	**Fixed Fees**	**Performance Fee**
	Rs 50 lakhs to < Rs 5 Cr	2.50%	1.75%	15% sharing over 9% hurdle rate
	Rs 5 Cr to < Rs 10 Cr	2.10%	1.40%	
	Rs 10 Cr and above	1.75%	1.10%	
Performance Fee	Annual with high water mark applicable. No catch-up			
Exit Load	1.5 % up to 12 months. NIL there after			

Source: Slide 4 of presentation https://www.hdfcsec.com/hsl.docs//Monthly%20Product%20Deck%20Apr'22-20220418115157558814.pdf

Hurdle Rate

A hurdle rate is the minimum amount of profit or returns a fund must earn before it can charge an incentive fee.

SEBI circular on Hurdle Rate

Fees and Charges

a) Profit sharing / performance related fees are usually charged by portfolio managers upon exceeding a hurdle rate or benchmark as specified in the agreement. However there is no uniformity in practice on how the profit / performance of the portfolio computed. It is advised that, henceforth, profit / performance shall be computed on the basis of high water mark principle over the life of the investment, for charging of performance / profit sharing fee.

Hurdle Rate & High-Water Mark in Action

- Note the 9% hurdle rate and the reference to annual high-water mark
- No catch-up means that the manager only charges 15% of returns in excess of 9% in this example. i.e., the manager does not receive any share of returns up to 9%

Abakkus All Cap Approach PMS

(4 of 4 slides)

Fund Manager: Sunil Singhania	Sunil Singhania, a CA rank and CFA charter holder, is a reputed name in Indian equities. He last served as CIO-Equities for Reliance Mutual Fund, where he oversaw over $ 1 billion of equity assets. Sunil is regarded as one of the top Equity Fund Managers in the country (rated best Fund Manager by Outlook Business in 2016 and 2017 over 10 year time frame). He is the first Indian to be appointed on the Global Board of CFA Institute, USA. Currently Honorary Chairman of Investment Committee of CFA Institute. Sunil is currently on the IFRS Capital Markets Advisory Committee (CMAC) and the only member from India to be appointed for the same (2020 - 2023)

Portfolio Manager	Sunil Singhania / Aman Chowhan			
Benchmark	S&P BSE 200			
Investment Tenure	Open ended PMS with investment horizon of more than 3 years			
Minimum Initial Investment Amount	Rs 50 lacs			
Minimum Add-on Investment Amount	Rs 5 lacs			
NRI Eligibility	NRIs can invest on a case to case basis and in consultation with fund house			
	US and Canada based NRIs are not allowed to invest			
Annual Management Fee	**Fixed Fee only**		**Fixed + Performance Fee**	
	Amount	**Fixed Fees**	**Fixed Fees**	**Performance Fee**
	Rs 50 lakhs to < Rs 5 Cr	2.50%	1.75%	15% sharing over 9% hurdle rate
	Rs 5 Cr to < Rs 10 Cr	2.10%	1.40%	
	Rs 10 Cr and above	1.75%	1.10%	
Performance Fee	Annual with high water mark applicable. No catch-up			
Exit Load	1.5 % up to 12 months. NIL there after			

Preferred return in the context of Cat 1 and Cat 2 funds

Funds such as venture capital and private equity funds typically set terms whereby the fund managers are rewarded only after a certain minimum level of returns are achieved. This is operationally achieved by setting up a “waterfall” of payments which prioritizes payments.

Simple illustration (More complex variations are also quite common)

First: Pay 100% of the distributions until the investors’ have received back an amount equal to the capital they have contributed to the fund

Second: Pay 100% of the distributions until investors’ have received a certain minimum level of returns (typically known as “preferred return”) measured by IRR.

Third: Pay 100% of the distributions until the fund managers (sponsors) have received 20% of the profits distributed towards performance fee (catch up)

Thereafter: 20% to the fund managers and 80% to the investors

Preferred Rate in the context of Cat 1 and Cat 2 funds

Simple Numerical Illustration

- Catch up after capital has been fully returned and IRR of 8% achieved which takes place in 2026-2027 in this illustration
- In 2028, the Rs 5.5 shown in the table below is calculated as sum of 20% of 27.5 (profits distributed until previous year).

			Distributions		
	Cashflows	Capital returned	Investor	Manager	Fund manager performance fee comments
21-12-2022	-100				Rs 100 invested
21-12-2023	12	12	12		
21-12-2024	27	39	27		
21-12-2025	40	79	40		
21-12-2026	21	100	21		Capital fully returned
21-12-2027	27.5	127.5	27.5		IRR of 8% achieved
21-12-2028	7	134.5		5.5	Catch-up: 20% of 27.5 = 5.5 leaving 1.5 for further distributions
			1.2	0.3	Of the balance 1.5, 1.2 goes to the investor and 0.3 to the manager
21-12-2029	12	146.5	9.6	2.4	20% of 12 which is 2.4

Fund Administration Leaders Program

FLP

What is Equalization and why is it necessary?

While there are a few reasons why equalization is necessary, we share below the most obvious reason.

Source: https://www.mainstreamgroup.com/assets/uploads/2020/03/Mainstream-Equalisation-whitepaper-Mar-20-.pdf

Free Ride

If an investor buys a Share in a fund for $100, and the NAV (Net Asset Valuation) per Share rises to $110, the investor must pay an incentive fee. If the NAV per Share falls to $100 again, and a second investor buys a Share, he will only have to pay an incentive fee after the NAV exceeds $110. The second investor gets a "free ride" by not paying an incentive fee when the fund increases from $100 to $110, but the original investor doesn't benefit.

Objectives of Equalization

No single methodology of equalization fulfils all the objectives.

Source: https://www.mainstreamgroup.com/assets/uploads/2020/03/Mainstream-Equalisation-whitepaper-Mar-20-.pdf

- Equitable allocation of incentive fees between each investor in a fund, to both ensure that the investment manager is paid correctly and that no investor or group of investors subsidises or is subsidised by another
- Equitable capital risk per investor per Share
- A single NAV per Share
- A published NAV that accurately reflects the fund's performance
- Easy comprehension of the Equalisation Method by both investors and investment managers

Different kinds of equalization

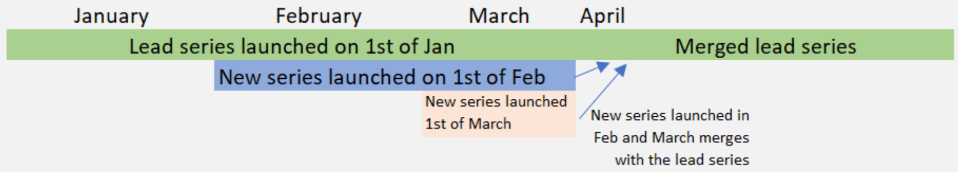
Series of shares

Equalization factor/Depreciation deposit

Equalization share adjustment

Series of Shares

- Relatively simple idea which involves issuing a fresh series of shares periodically (say, every month)
- At the end of an accounting period (say, a quarter), after the fee has been separately calculated and applied to each series, they are ready to be merged with the main series
- In the illustration below, the new series launched in February and March are ready to be merged with the lead series at the end of March once the fee for the first period has been applied
- Merger involves exchanging the shares issued in February for shares issued in January in an equivalent value
- Challenges: A rapidly expanding fund might have to issue a large number of different series requiring different NAVs to be calculated and published before they are ready to be merged.



equaliFi

KFINTECH
EXPERIENCE TRANSFORMATION

Series of Shares

- Illustrative numerical example

	January	February	March	Quarter end	Merger at the end of the quarter
Lead Series	Investor A buys 1000 lead series shares at Rs 100 each	GNAV per share has risen by 10% to 110. NAV published for the lead shares is 108 after deductiing performance fee	Assume GNAV rises by a further 10%. The GNAV of the lead series is now 121. The NAV is 116.80	Assume GNAV rises by a further 10%. The GNAV of the lead series is now 133.1 and NAV is 126.48	
Series II		Investor B buys 1000 shares of series II at Rs 100 each at the start of the month	The GNAV of series II is 110 and NAV is 108	The GNAV of series II is 121 and the NAV is 116.80	Investor B exchanges 1000 shares of series II which are now worth 1,16,800 for 923.466 shares of the lead series
Series III			Investor C buys 1000 shares of series III at Rs 100 each, at the start of the month	The GNAV of series III is 110 and the NAV is 108	Investor C exchanges 1000 shares of series III which are now worth 1,08,000 for 853.88 shares of the lead series

Equalization factor/Depreciation Deposit Approach

- New investors entering in the middle of an accounting period invest at the GNAV. Subsequently, if the fund value is unchanged, the difference between the GNAV and NAV (known as the equalization factor) is refunded to the investor in the form of additional units.
- In the illustration below, if the fund NAV remains at 108, the investor is refunded by issuing an extra 0.01851 units (calculated as 2 divided by 108)
- If the GNAV drops to, say, 105 in March in the below illustration, then the equalization does not apply. However, if the GNAV rises to 110 subsequently, the equalization will apply

	January	February	March	April
GNAV	100	110	110	110
NAV		108	108	All units now have an NAV of 108
New investor invests		110	New investor gets 1.01851 units	

Equalization share adjustment method

- Performance fee accrued monthly but payable yearly
- Loss carry forward for each participating share to ensure that if the NAV decreases and subsequently increases, there will be no performance fee applicable for any such subsequent increase
- Deficit subscription adjustments: When investments are made when the NAV is below the HWM, performance fee due to any subsequent increase in the NAV up to the HWM which is applicable to new investors will be charged by redeeming for no consideration, an amount of units which is equal to the performance fee
- The illustrative example below assumes that an investor invests when the GNAV is 90 and the HWM if Rs 100

GNAV at the next valuation date	Total performance fee due	Portion of the fee payable by deduction from gross NAV	Portion of the fee payable by redemption of shares without consideration	NAV	Shares redeemed without consideration
90	0	0	0	90	0
100	2	0	2	100	0.02
110	4	2	2	108	0.0185

Mutual Fund Performance Measurement

- Point to point or absolute returns
- Compounded Annual Growth Rate (CAGR)
- XIRR

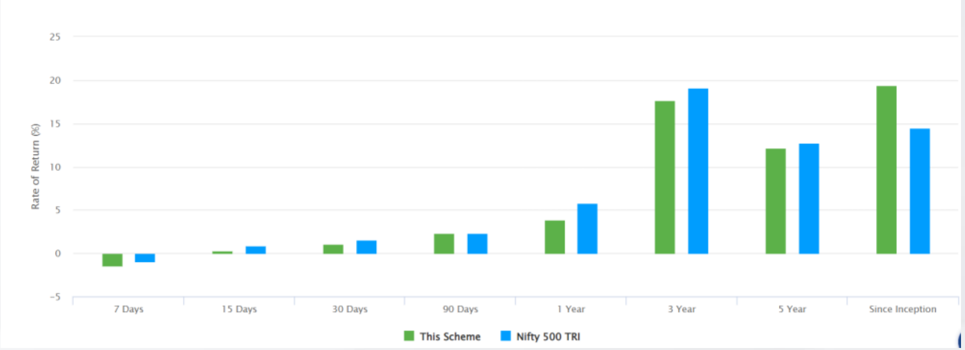
(Please refer to the spreadsheet for illustrations)
Source: https://www.tatamutualfund.com/about-us/blog/how-calculate-mutual-funds-returns-sip-lumpsum-investments

Mutual Fund Performance Measurement

- Performance is typically measured and reported both in absolute terms and relative to an index
- Screengrabs from ICICI Prudential Long Term Equity fund show that the benchmark for the scheme is NIFTY500 TRI

Returns of ICICI Prudential Long Term Equity Fund (Tax Saving) - Growth Option as on October 31,2022 - (IPLTEF)

Particulars	1 Year		3 Year		5 Year		Since Inception	
	CAGR (%)	Current Value of Investment of Rs. 10000	CAGR (%)	Current Value of Investment of Rs. 10000	CAGR (%)	Current Value of Investment of Rs. 10000	CAGR (%)	Current Value of Investment of Rs. 10000
Scheme	1.90	10191.41	17.17	16093.42	12.45	17986.57	19.42	616040.00
Nifty 500 TRI (Benchmark)	3.52	10354.44	18.03	16452.03	12.29	17857.56	14.39	226785.62
Nifty 50 TRI 2 (Additional Benchmark)	3.30	10332.08	16.23	15708.83	13.16	18557.80	13.36	183831.32
NAV (₹) Per Unit	604.47		382.79		342.50		10	



Mutual Fund Expenses

- SEBI caps how much a mutual fund can charge the investors for expenses
- However, mutual funds have been allowed to charge up to 30 bps more, if the new inflows from retail investors from beyond top 30 cities (B30) cities are at least (a) 30% of gross new inflows in the scheme or (b) 15% of the average assets under management (year to date) of the scheme, whichever is higher. This is essentially to encourage inflows into mutual funds from tier - 2 and tier - 3 cities.
- Source: AMFI

Assets Under Management (AUM)	Maximum TER as a percentage of daily net assets	
	TER for Equity funds	TER for Debt funds
On the first Rs. 500 crores	2.25%	2.00%
On the next Rs. 250 crores	2.00%	1.75%
On the next Rs. 1,250 crores	1.75%	1.50%
On the next Rs. 3,000 crores	1.60%	1.35%
On the next Rs. 5,000 crores	1.50%	1.25%
On the next Rs. 40,000 crores	Total expense ratio reduction of 0.05% for every increase of Rs.5,000 crores of daily net assets or part thereof.	Total expense ratio reduction of 0.05% for every increase of Rs.5,000 crores of daily net assets or part thereof.
Above Rs. 50,000 crores	1.05%	0.80%

Fund Administration Leaders Program

FLP

PMS Performance – A note on TWRR

- SEBI requires PMS funds to calculate returns using the time weighted rate of return method
- Source: https://www.sebi.gov.in/sebi_data/faqfiles/oct-2020/1603946323909.pdf

भारतीय प्रतिभूति और विनिमय बोर्ड
Securities and Exchange Board of India

The performance of a discretionary portfolio manager is calculated using time weighted rate of return (TWRR) method for the immediately preceding three years or period of operation, whichever is lesser.

An account is funded on 1-Jan-2019 by an amount 50,00,000. On 1-Mar-2019, client contributed additional 20,00,000. The market value of the account as on 28-Feb-2019 is 49,00,000. On 1-Oct-2019, the client withdrew an amount of 10,00,000 from the account. The market value of the account on 30-Sep-2019 was 75,00,000. The market value of the account on 31-Dec-2019 was 70,00,000.

Sub-Periods	Sub-period returns	Sub-period returns + 1
1-Jan-2019 to 28-Feb-2019	(49,00,000 – 50,00,000) ÷ 50,00,000 = -2.00%	(1 – 2.00%) = 0.98
1-Mar-2019 to 30-Sep-2019	(75,00,000 – 49,00,000 – 20,00,000) ÷ (49,00,000 + 20,00,000) = 8.69%	(1 + 8.69%) = 1.08
1-Oct-2019 to 31-Dec-2019	(70,00,000 - 75,00,000 + 10,00,000) ÷ (75,00,000 - 10,00,000) = 7.69%	(1 + 7.69%) = 1.07
TWRR		**((0.98*1.08*1.07) – 1)*100 = 14.7%**

Thank You

Fund Administration
Leaders Program