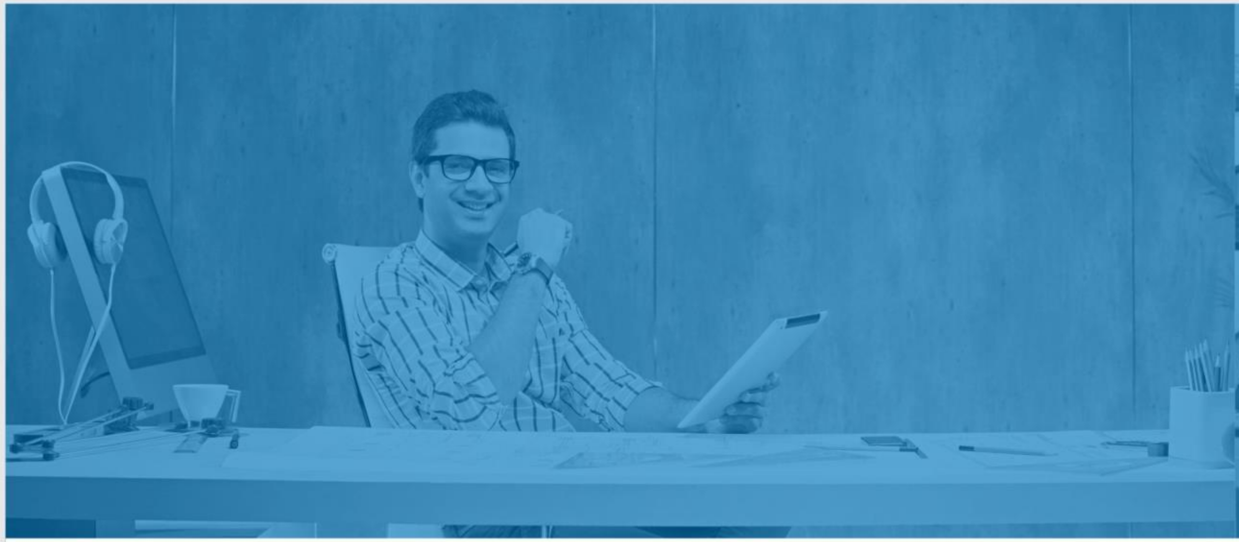
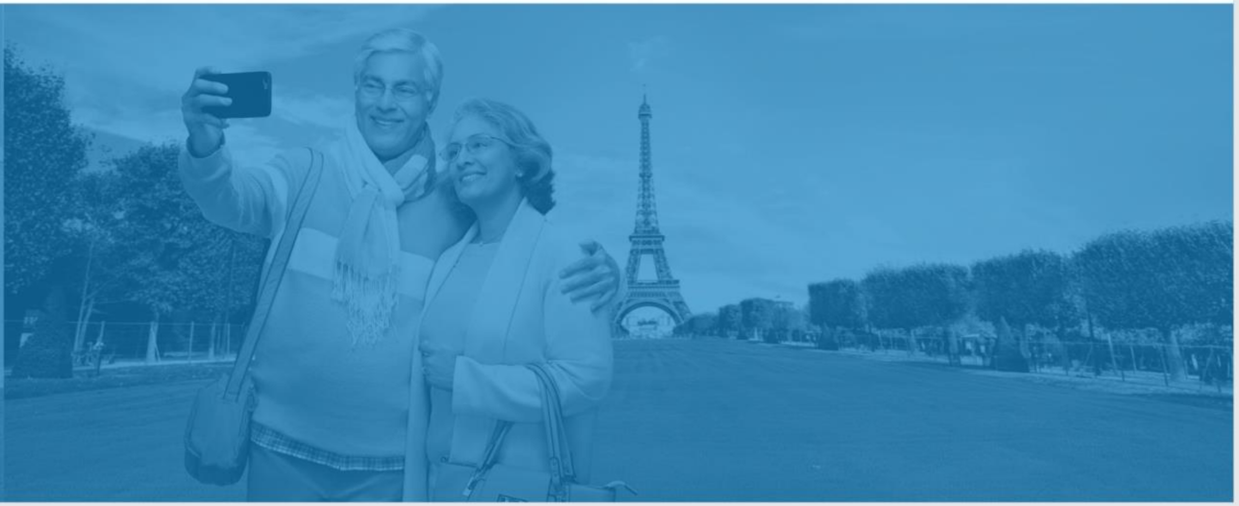



Lessons In Investing - Part 2

LIFE GOALS. **DONE.**

BAJAJ | Allianz

Focus on Downside Risk

"Only when the tide goes out do you discover who's been swimming naked" – Warren Buffet

First lets take a look at some of the downside risk metrics like Downside Capture Ratio, Maximum Drawdown etc.

Downside Capture Ratio

- It measures how the fund has done in market down-periods, and is therefore a **measure of downside risk.**
- Down-periods are those months in which the benchmark has given a negative return.
- Then the downside capture ratio measures how much of the index downside has the fund captured in those down market months cumulatively.
- If the downside capture ratio of a fund **is 70, it means that the fund has captured 70% of the downside of index**—thereby protecting downside risk

Upside Capture Ratio

- It measures how the fund has done in market up-periods.
- Up-periods are those months in which the benchmark has given a positive return.
- Then the upside capture ratio measures how much of the index upside has the fund captured in those up market months cumulatively.
- If the upside capture ratio of a fund **is 115, it means that the fund has captured 115% of the upside of index**—thereby indicating that it has outperformed the benchmark in up-periods.

Maximum Drawdown

- To measure the fund performance during market downturn we also have a metric called Maximum (Max) Drawdown
- It is the maximum fall in the fund's NAV during any market downturn from the market peak to the valley date (that is when the market starts to turnaround).
- Maximum drawdown of a fund is available over various time periods.

Equity ULIPs or MFs should have reasonably good upside capture ratio, and relatively lower downside capture ratio—to provide optimal returns over the long term

Actual fund names have been removed due to sensitivity purpose. Mutual fund flexi-cap category has been considered due to sufficient universe of funds in 2006-07, to make this analysis legible.

Analysis of Top 10 Performing Funds during CY 2007 from Morningstar India Mutual Fund Flexicap Category

Fund Name	CY 2007 Return (%)	Rank / No. of Funds	CY 2008 Return (%)	Rank / No. of Funds	Capture Ratios (as of May 2018)			Max Drawdown - 10 Yr (as of May 2018)			Morning Star Rating 10 Yr May 2018	10 yr CAGR Return (%) as of May 2018	Rank / No. of Funds
					Upside Capture Ratio 10 Yr	Downside Capture Ratio 10 Yr	Overall Capture Ratio 10 Yr	Max Drawdown (in %)	Max Drawdown Peak Date	Max Drawdown Valley Date			
Fund A	108.8	1 / 49	-75.7	58 / 58	113.3	149.4	0.76	-71.7	Jun-08	Feb-09	★	1.9	57 / 58
Fund B	100.4	2 / 49	-75.2	57 / 58	106.2	117.0	0.91	-68.8	Jun-08	Feb-09	★	7.8	56 / 58
Fund C	90.9	3 / 49	-54.6	34 / 58	107.9	101.2	1.07	-45.4	Jun-08	Feb-09	★★★	12.7	24 / 58
Fund D	89.4	4 / 49	-56.8	45 / 58	94.4	88.9	1.06	-46.9	Jun-08	Feb-09	★★	11.1	40 / 58
Fund E	87.7	5 / 49	-66.2	56 / 58	99.7	108.0	0.92	-55.5	Jun-08	Feb-09	★	7.9	55 / 58
Fund F	80.7	6 / 49	-53.8	30 / 58	107.2	93.3	1.15	-47.1	Jun-08	Feb-09	★★★★	14.5	9 / 58
Fund G	76.1	7 / 49	-59.2	50 / 58	91.5	91.0	1.01	-51.4	Jun-08	Mar-09	★	9.5	50 / 58
Fund H	74.0	8 / 49	-60.9	51 / 58	94.2	92.5	1.02	-51.8	Jun-08	Feb-09	★★	10.0	49 / 58
Fund I	68.4	9 / 49	-61.4	52 / 58	99.4	93.8	1.06	-53.4	Jun-08	Feb-09	★★	10.1	48 / 58
Fund J	68.2	10 / 49	-44.4	8 / 58	87.1	75.8	1.15	-32.3	Jun-08	Nov-08	★★★★	11.9	30 / 58
BSE 500 index	**61.3**		**-58.1**					**-50.1**	**Jun-08**	**Feb-09**		**8.6**	
Morningstar India MF Flexicap category	**57.7**		**-54.0**		**94.6**	**85.9**	**1.10**	**-43.6**	**Jun-08**	**Feb-09**		**11.8**	

Source: Bajaj Allianz Life Insurance Analysis, Morningstar. Only growth option and regular plans considered. Capture Ratios are calculated versus BSE 500 index. Past performance is not indicative of future returns

- Many of the top performing flexi-cap equity funds of 2007 (who took on higher risk in their portfolios by investing in high-momentum stocks / sectors) ended up being the bottom performing funds during the market downturn of 2008, and fell by 60-75% during the calendar year. ***These are highlighted in blue***
- The highlighted funds also have a pretty high downside capture ratio over 10 year period and also higher maximum drawdown – indicating that they have not been able to protect downside risk. Their subsequent 10 year CAGR returns (ended May 2018) are also relatively lower, **and have lower star ratings as well**.
- For eg. Fund A was the top performing fund within the category in CY2007, but wiped out most of its return during market downturn of 2008. Its downside capture ratio & max drawdown is also high, while its 10 year return is lowest within the category & it is a 1-star rated fund. On the flipside, Fund F has a relatively lower downside capture ratio & higher upside capture ratio, and managed to deliver good returns over a 10 yr period, and is a 4-star rated fund.

Fallacy of Focusing on short term point-to-point performance

"The individual investor should act consistently as an investor and not as a speculator." – Benjamin Graham

Very strong performance by a fund in a momentum market for 1 or 2 years, can spill into it's trailing returns as well. Consistency in performance is more important.

Actual fund names have been removed due to sensitivity purpose. Mutual fund flexi-cap category has been considered due to sufficient universe of funds in 2006-07, to make this analysis legible.

Year-Wise Performance Ranking of Top 10 Performing Funds during (2006-2007) from Morningstar MF Flexicap Category

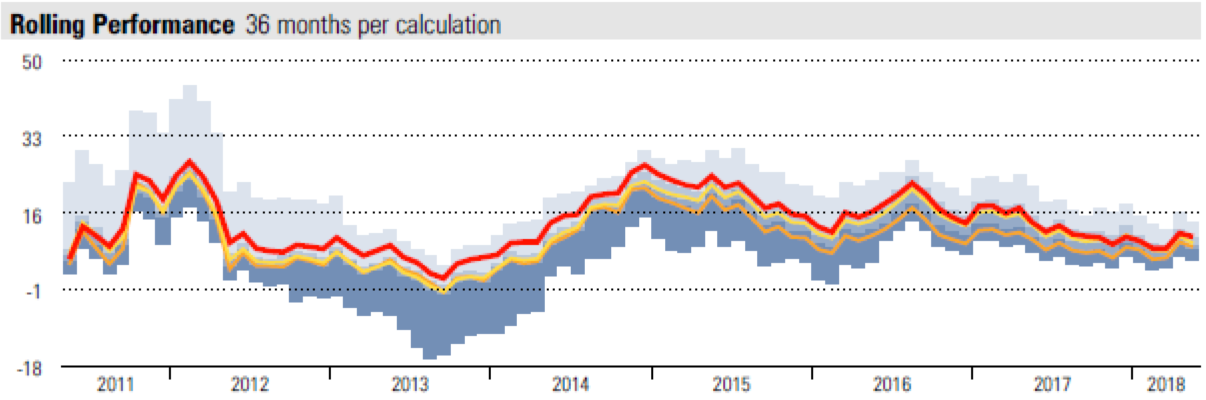
Fund Name	Jan 2006 - Dec 2007	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank
Fund A	1	59	13	69	71	10	76	31	37	10	12
Fund B	2	35	11	34	62	7	74	21	23	80	7
Fund C	3	57	33	20	21	41	51	64	73	71	67
Fund D	4	46	42	39	31	47	46	40	40	14	51
Fund E	5	56	6	32	9	66	5	60	17	85	48
Fund F	6	28	22	68	59	24	67	48	66	59	30
Fund G	7	31	15	45	56	18	70	25	21	51	13
Fund H	8	39	28	36	49	31	14	47	9	65	25
Fund I	9	52	16	66	34	27	20	46	20	63	68
Fund J	10	45	25	57	60	23	27	20	45	4	63
No. of Funds in Category	45	59	62	69	72	77	78	80	85	87	87

Source: Morningstar, Bajaj Allianz Life Insurance Analysis. Returns for Jan 2006 - Dec 2007 are CAGR. Calendar year returns are absolute. Only regular plans and growth option considered. Past performance is not indicative of future returns.

- Investors look at the point-to-point (P2P) trailing returns of a fund, and some tend to incorrectly focus more on which have been the top performing funds over the past year especially. The problem with P2P returns is that they tend to get distorted sometimes due to huge outperformance in 1 or 2 years and spill-over into other trailing periods, esp. in a momentum market.
- The performance ranking of the top 10 performing funds from flexi-cap category funds during 2006-07 (in above table), varied widely in the following years, and in several years, most of the top 10 performing funds (of 2006-07) failed to re-appear consistently among the top 10 ranks again in the following years, or for that matter in the top quartile.
- One parameter to look at is the **rolling returns** of the fund versus benchmark index and peer category, as this metric helps to remove the point-to-point bias in performance, and displays the returns in overlapping cycles- thereby measuring consistency in performance.

Rolling returns helps to measure consistency in performance of a ULIP / Fund

Illustration of Rolling Returns Evaluation of Fund XYZ



Name	Total # of Calculations	% in Top Quartile	% in 2nd Quartile	% in 3rd Quartile	% in Btm Quartile	% Above B-mark 1	% Above B-mark 2
Subject Investment	85	58.82	36.47	4.71	0.00	100.00	95.29

Rolling Returns: 3 year rolling returns over 10 year period – with monthly shift (as of May 2018). **Subject Investment** is Fund XYZ, **B-mark 1** is benchmark Index, and **B-mark 2** is peer category average.

Source: Morningstar

- Rolling returns is a metric to measure **consistency in performance** of a fund. It helps to **remove the point-to-point bias in performance**, and display the returns in overlapping cycles.
- For example if we take 3-year rolling returns, with monthly shift, over a 10-year period, then it will show how the fund has done in various 3-year periods (rather than a discrete 3 year period), and by shifting a month each time, over a 10-year tenure. In the above illustration the first rolling period would be from 31 May 2008 to 31 May 2011. Then we shift by a month, and the next rolling period would 30 June 2008 to 30 June 2011, and so on and so forth. So we will have total of 85 rolling period observations over a 10 year period ended May 2018, with the last rolling period being 31 May 2015 to 31 May 2018.
- You can analyse in how many percentage times of the rolling period observations, the fund has beaten the benchmark index as well as the peer category. You can go one step further, and analyze that within the rolling period observations how much percentage of observations feature in each of the four quartiles (within respective peer category).
- In the above illustration, the fund has beaten the benchmark index in 100% of observations and the peer category (b-mark 2) in 95% of observations. Also, ~59% of its rolling observations lie in the 1st quartile (top 25% of funds in peer category), and 95% of rolling observations in top 2 quartiles—indicating strong consistency in performance.

Over the long term, the chance of making negative returns in equities reduces

"The stock market is a device for transferring money from the impatient to the patient" - Warren Buffett

Longer the holding period – lower the risk of investing in equities

Nifty in 27 Years	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years
Total Years	**26**	**24**	**22**	**17**	**12**	**7**
Negative Years	11	4	3	1	0	0
Positive Years	15	20	19	16	12	7
% age in +ve years	**58%**	**83%**	**86%**	**94%**	**100%**	**100%**
Lowest Return in %	-47.6	-13.8	-5.2	-1.1	6.5	7.4
Highest Return in %	244.3	51.5	37.1	19.2	16.0	14.8
Avg Return in %	**22.0**	**12.2**	**11.0**	**11.5**	**12.1**	**11.0**

Source: Bloomberg, Bajaj Allianz Life Insurance Analysis. Past performance is not indicative of future returns.

- Equities help beat inflation and meet longer term goals.
- Individual stocks are risky, but as a portfolio of stocks, risk gets minimized. Risk and chances of delivering negative returns further gets reduced by investing in regular intervals over a longer time period.
- For 5 year period, 86% of cases were positive return years, and the lowest yearly return was -5.2% for Nifty index.
- For 10 year period, almost all years (except 1) delivered positive returns, and the lowest yearly return was -1.1% for Nifty index.
- Above 10 year period, there have been no cases of negative returns.

THANK YOU

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