quant
MULTI ASSET FUND

Project Title: " A Hypothesis Testing Based on Quant Mutual Fund"

__Decades of Experience__: Quant Mutual Fund, established in 1996, boasts a remarkable track record with over 22 years of experience in India's asset management industry. Over the years, quant has carved a pioneering and enduring reputation in the Indian mutual fund landscape, making it a prime candidate for hypothesis testing.

__Trust and Reliability__: This extensive history reflects the trust and reliability that investors have placed in Quant Mutual Fund over more than two decades.Active Investment Approach: Quant Mutual Fund adopts an active investment approach characterized by continuous monitoring, analysis, and proactive decision-making.

__Alpha Generation__: Their primary goal is to generate alpha, which represents returns exceeding the market benchmark, demonstrating their commitment to delivering value to investors.
Investor-Centric: Throughout their dynamic money management process, the utmost priority is given to safeguarding the interests of their investors.

__Research and Indicators__: Philosophy of Active Investing: quant Mutual Fund's investment philosophy centers on an active, absolute, and unconstrained approach, meaning they actively seek opportunities, aim for absolute returns, and don't limit themselves to specific asset classes. Quant's approach is built upon a foundation of multi-dimensional research, enabling them to consider a wide range of factors in their decision-making process

__About Quant Money Managers Ltd__.: Investment Management Expertise: Quant Money Managers Ltd. is an investment management firm known for its expertise across various asset classes.
Technology-Driven Foundation: Their proficiency in investment management is rooted in technology-driven approaches and multi-dimensional research, inherited from their sponsor, quant Capital Finance & Investments Pvt Ltd.
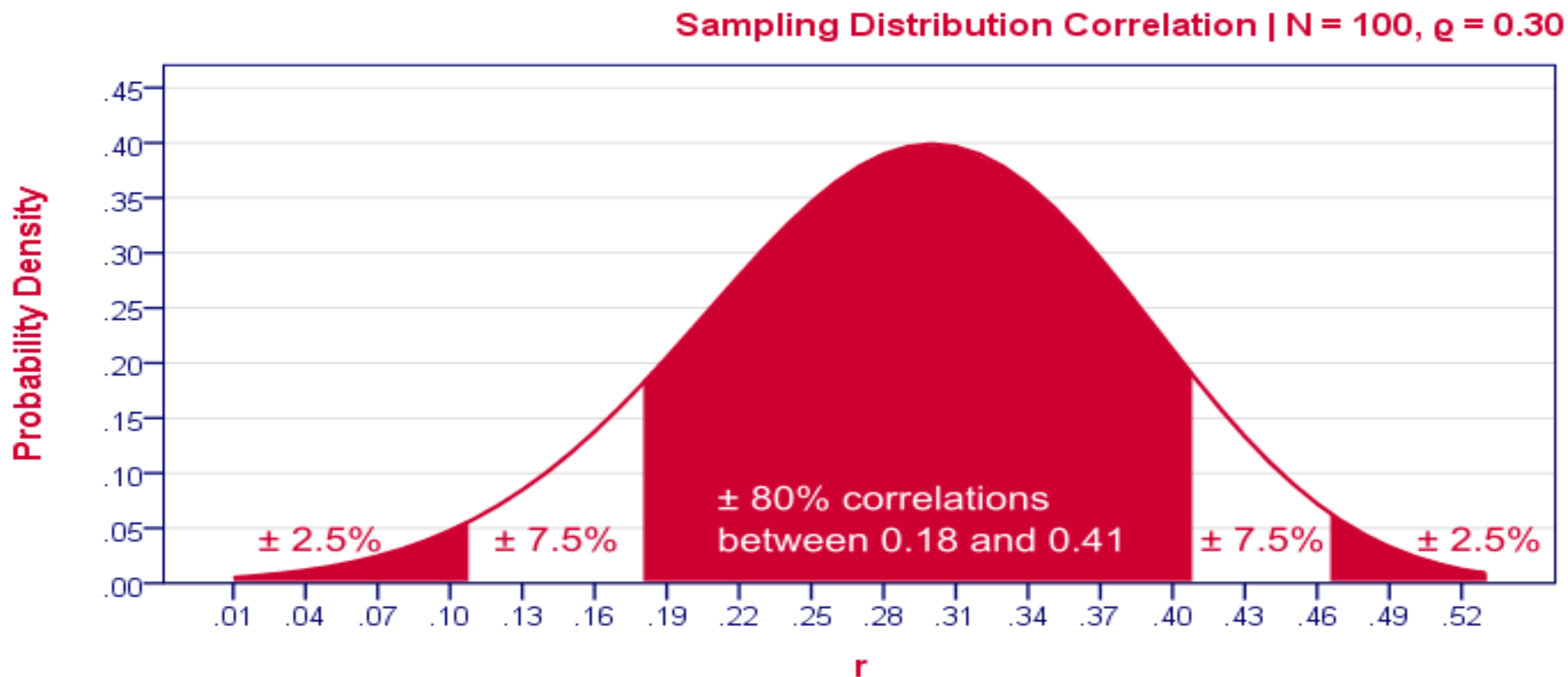
__Market Insights: quant Money Managers Ltd__. has excelled in offering market insights that go beyond conventional methods, capitalizing on technology and multi-dimensional research to stay ahead in diverse market conditions.

Null And Alternative Hypothesis

A null hypothesis is a type of conjecture in statistics that proposes that there is no difference between certain characteristics of a population or data-generating process. For example, an investor may be interested in whether the chance of investing is fair. If it is fair, then the expected earnings per investment come to zero for both the investors. If the investment is not fair, then the expected earnings are positive for one investor and negative for the other. To test whether the investment is fair, the investor collects earnings data from many repetitions of the funds, calculates the average earnings from these data, then tests the null hypothesis that the expected earnings are not different from zero.

If the average earnings from the sample data are sufficiently far from zero, then the investor will reject the null hypothesis and conclude the alternative hypothesis— namely, that the expected earnings per investment are different from zero. If the average earnings from the sample data are near zero, then the investor will not reject the null hypothesis, concluding instead that the difference between the average from the data and zero is explainable by chance alone.

Null And Alternative Hypothesis Range For Quant Multi Asset Growth Mutual Fund

Sampling Distribution Correlation | N = 100, ϱ = 0.30

Probability Density

± 2.5% ± 7.5% ± 80% correlations between 0.18 and 0.41 ± 7.5% ± 2.5%

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YEARS	ANNUAL RETURNS (%)
2002	17.31
2003	7.99
2004	-0.09
2005	4.28
2006	3.78
2007	5.02
2008	35.77
2009	-4.48
2010	5.93
2011	6.14
2012	8.2
2013	6.65
2014	7.4
2015	7.43
2016	13.05
2017	1.99
2018	4.53
2019	10.36
2020	26.89
2021	54.05
2022	13.25

This is 20+ years' Annual Return Data for "Quant Multi Asset Gr".
This is considered to be the population data for the project.

POPULATION MEAN	11.21190476
POPULATION STANDARD DEVIATION	13.22394405
no of observ	21

YEARS	ANNUAL RETURNS (%)
2018	4.53
2019	10.36
2020	26.89
2021	54.05
2022	13.25

Sample mean	21.816
Sample SD	19.80024192
no of observ	5

Quant multi asset growth mutual fund with a random sample of last 5 years with a total of 21 observations

H0 : μ ≤11.21
Ha : μ >11.21

	Population	Sample
MEAN	11.21190476	21.816
STANDARD	13.22394405	19.80024192
NO OF OBS	21	5

Alpha	0.05
T-TEST	1.793071546
DEGREE O	20
P VALUE	0.088099537

P value is more than Alpha ,it will fail to reject the null hypothesis and we do not have enough data to support the alternative hypothesis or the alternative is false.

YEARS	ANNUAL RETURNS (%)
2002	17.31
2003	7.99
2004	-0.09
2005	4.28
2006	3.78

Sample mean	6.654
Sample SD	6.608943183
no of observ	5

Quant multi asset growth mutual fund with a random sample of first 5 years with a total of 21 observations

HO : $\mu \leq 11.21$

Ha : $\mu > 11.21$

	Population	Sample
MEAN	11.21190476	2.453
STANDARD DEVIATION	8.223944048	6.608943183
NO OF OBSERVATIONS	21	5

Alpha	0.05
T-TEST	-2.38152234
DEGREE OF CONFIDENCE	20
P VALUE	0.027288571

P value is more than Alpha ,it will reject the null hypothesis and we have enough data to support the alternative hypothesis or the alternative is true.

CONCLUSION

*Quant has consistently stood at the forefront of data analytics, incorporating cutting-edge technologies like AI and machine learning for over a decade. Their commitment to innovation and technology has become an integral part of their core identity, making them a compelling subject for our hypothesis testing. This will allow us to explore the impact of innovation on the performance of quant mutual funds.

*Quant has earned a strong reputation for pioneering the application of behavioral finance principles to investing in India. They emphasize the profound influence of market sentiments on investment decisions. In our hypothesis testing, we will delve into the effectiveness of their behavioral finance approach and how it impacts investor outcomes.

*Quant's extensive product range covers the entire spectrum of investor needs, offering a versatile array of investment options. This diversity opens up an intriguing opportunity for hypothesis testing to understand how different products perform under various market conditions, catering to different investor objectives.

*Quant's mission centers around the concept that 'Measurable is Reliable.' Their commitment to extensively back-tested indicators that capture market trends and provide actionable analyses is integral to their unique approach to investment in today's complex financial landscape. In our hypothesis testing, we will assess the reliability and effectiveness of these indicators in guiding investment decisions and producing favorable outcomes for investors.

A Project By :

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