Financial Modelling Templates

Jensen Alpha

http://spreadsheetml.com/finance/jensenalpha_performanceindex.shtml

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ConnectCode's Financial Modelling Templates

Have you thought about how many times you use or reuse your financial models? Everyday, day after day, model after model and project after project. We definitely have. That is why we build all our financial templates to be reusable, customizable and easy to understand. We also test our templates with different scenarios vigorously, so that you know you can be assured of their accuracy and quality and that you can save significant amount of time by reusing them. We have also provided comprehensive documentation on the templates so that you do not need to guess or figure out how we implemented the models.

All our template models are only in black and white color. We believe this is how a professional financial template should look like and also that this is the easiest way for you to understand and use the templates. All the input fields are marked with the '*' symbol for you to identify them easily.

Whether you are a financial analyst, investment banker or accounting personnel. Or whether you are a student aspiring to join the finance world or an entrepreneur needing to understand finance, we hope that you will find this package useful as we have spent our best effort and a lot of time in developing them.

ConnectCode

1.   Jensen's Alpha

1.1   Jensen's Alpha

Jensen's Alpha is also known as the Jensen's Performance Index. It was first used in the 1970s by Michael Jensen to evaluate the performance of fund managers. Specifically, it is measuring the difference between the actual returns of a portfolio during a period and the expected returns of the portfolio using the Capital Asset Pricing Model (CAPM). The formula for Jensen's Alpha is as shown below:

Jensen's alpha = Portfolio Return–(Risk Free Rate+Portfolio Beta*(Market Return-Risk Free Rate))

This performance index is now widely used by the public for measuring the performance of investment or fund manager. The formula can be thought of as calculating the excess returns a fund manager has made over the broader market. An example of a broader market is the S&P 500 composite. A positive value indicates good securities picking skills of a fund manager. If you are comparing the Jensen's Alpha of similar portfolios by different fund managers, then the bigger the Jensen's Alpha indicates a better performance of the fund.

1.2   Jensen's Alpha Spreadsheet

This spreadsheet provides a basic template for calculating the Jensen's Alpha. It uses monthly data of the portfolio and the broader market over a period of 1 year for the calculation. This can be easily expanded to 3-5 years period commonly seen in investment reports.

	A	B	C	D	E
1					
2		Jensen's Alpha			
3		Copyright© 2009, ConnectCode. All rights reserved.			
4	Annual Risk free rate*				
5	3.00%				
6					
7	Date*	Portfolio Balance*	Market*	Portfolio Monthly Returns	Market Monthly Returns
8	1/1/2001	$100,000.00	$25.00		
9	2/1/2001	$101,000.00	$25.50	1.00%	2.00%
10	3/1/2001	$111,100.00	$23.81	10.00%	-6.63%
11	4/1/2001	$103,000.00	$15.75	-7.29%	-33.85%
12	5/1/2001	$105,000.00	$20.18	1.94%	28.13%
13	6/1/2001	$115,000.00	$19.00	9.52%	-5.85%
14	7/1/2001	$130,000.00	$20.00	13.04%	5.26%
15	8/1/2001	$125,000.00	$19.50	-3.85%	-2.50%
16	9/1/2001	$124,000.00	$21.00	-0.80%	7.69%
17	10/1/2001	$130,000.00	$22.00	4.84%	4.76%
18	11/1/2001	$131,000.00	$25.00	0.77%	13.64%
19	12/1/2001	$135,000.00	$23.00	3.05%	-8.00%
20	1/1/2002	$140,000.00	$26.00	3.70%	13.04%

1.2.1   Output

The Variance of the Portfolio and the Market is first calculated followed by the Covariance of the Portfolio with respect to the broader market. The S&P 500 composite data can be used in calculating the Jensen's Alpha of a U.S portfolio. The Variance and Covariance are then used in the calculation of the Portfolio's Beta. This Beta is used for calculating the Expected Return of the Portfolio using CAPM.

21				
22	Variance		0.0031	0.0211
23	Covariance(Portfolio,Market)			0.0021
24	Beta			0.1020
25	Average Monthly Returns of Portfolio			2.99%
26	Average Monthly Returns of Market			1.47%
27	Jensen's Alpha			2.62%
28				

The calculation of the monthly Risk Free rate is as shown below.

Monthly Risk Free Rate = ((1+Annual Risk Free Rate)^(1/12)-1)