

# Capital Asset Pricing Model

[http://spreadsheetml.com/finance/capitalassetpricingmodel\\_capm\\_securitymarketline.shtml](http://spreadsheetml.com/finance/capitalassetpricingmodel_capm_securitymarketline.shtml)

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## ConnectCode's Financial Modeling 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.*

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# 1. Capital Asset Pricing Model

## 1.1 Background

The Capital Asset Pricing Model is a theory developed by William Sharpe, John Linter and Jack Treynor in the 1960s. The model describes the relationship of the expected rate of return as a function of the risk free interest rate, the investment's beta, and the expected market risk premium.

Expected return = Risk free rate + Beta \* (Market Risk Premium)

The Market Risk Premium is defined as the Expected return of Market minus the Risk free rate.

## 1.2 Capital Asset Pricing Model Spreadsheet

### 1.2.1 CAPM Worksheet

This worksheet uses the Expected return of Market and Risk free rate to calculate the Expected return using the Capital Asset Pricing Model.

	A	B	C	D	E	F
1	Capital Asset Pricing Model (CAPM)					
2						
3						
4	Risk free rate (Rf)*			3.00%		
5	Beta (B)*			1.50		
6	Expected return of Market (ERM)*			9.00%		
7	Expected return (ER)			12.00%		

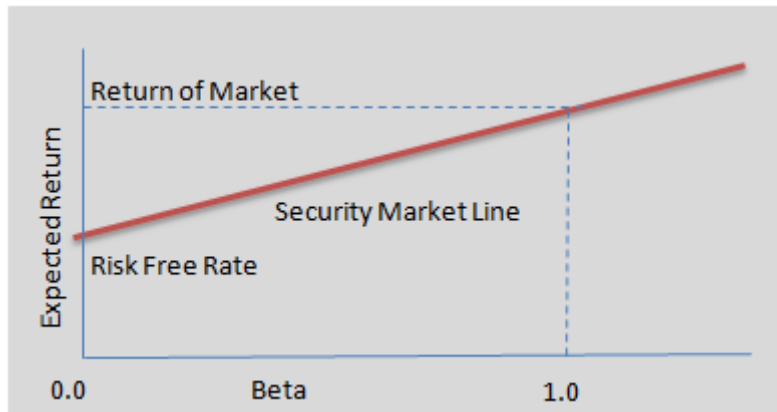
### 1.2.2 CAPM-MarketRiskPremium Worksheet

This worksheet uses the Market Risk Premium to calculate the Expected return using the Capital Asset Pricing Model.

	A	B	C	D	E	F
1	Capital Asset Pricing Model (CAPM) - Based on Market Risk Premium					
2						
3						
4	Risk free rate (Rf)*			3.00%		
5	Beta (B)*			1.50		
6	Market risk premium*			9.00%		
7	Expected return (ER)			16.50%		

## 1.3 Security Market Line

The Security Market Line can be thought of as the graphical representation of the Capital Asset Pricing Model. It illustrates the concept that it is possible to obtain any combination of risk and expected return along the slope of the graph by investing some portion of your investment in the market portfolio and borrowing the rest.



The Security Market Line is useful for determining whether an investment in an asset offers a good expected return for the risk taken. By providing the Beta of the asset, the Risk free rate and the Market Risk Premium, we will be able to plot the asset on the Security Market Line graph. If the Expected return versus Beta of the asset is plotted above the Security Market Line, the asset can be thought of as being able to provide a greater return for the inherent risk. An asset with a point below the Security Market Line can be thought of as getting less return for the amount of risk taken.