Jess

From: Sean@bank.com
Sent: Friday, 3:01 AM
To: Jess@bank.com
Subject: Quant Analysis

Hey Jess,

First – know that I am wearing the company tie and ironed shirt while writing this email! Can't believe I got chewed out for that …. The sooner I have a "laptop camera malfunction" the better!

How was dinner with Alex? It must be great to have your partner visit while you are stationed overseas – I will have to see if I can get Deb to take some time off and get down here …. the shopping is fantastic in Melbourne (apparently … I wouldn't know because it's like I'm working two jobs at the moment!!!)

Alright – it sounds like we are on the home-stretch with a final bit of quant analysis required for the client. I have heard on the grapevine that this guy is a stickler for following formatting instructions as well – so I will be very careful to highlight how he wants his answers – make sure you follow these instructions!

So the client provided us with roughly a year of daily returns from his existing portfolio. I then supplemented this with return data from the broad-based index (the S&P 500) and Hasbro stock. Here's what you need to provide him with:

1. Standard deviation of returns – measured on a per annum basis – for his pre-existing portfolio, the S&P500 and Hasbro shares. Make sure that you express these in percentage terms with 2 decimal places (e.g. 32.23%). Also – two tips – firstly there are 246 days of returns in this sample year – don't forget that when you scale up to the per annum figure! Secondly – when choosing your standard deviation measure in excel – make sure you remember that we are estimating the measure for a *sample* of returns – not a *population*! This will affect the final answer!!
2. The beta of his pre-existing portfolio and for Hasbro shares alone. Make sure you express these to 2 decimal places (e.g.1.36).
3. The per annum standard deviation of the portfolio's returns following the inclusion of Hasbro (report to 2 decimal places).
4. The beta for the portfolio following the inclusion of Hasbro (report to 2 decimal places).
5. The expected return for the portfolio following the inclusion of Hasbro (report in percentage terms to 2 decimal places e.g. 15.20%). Don't forget the measures of market risk premium and risk free rate mentioned by Paul in the teleconference.
6. A brief discussion highlighting the diversification benefit of adding Hasbro to the portfolio

That should just about do it. It's been great working with you on the project – hopefully we can catch up for a coffee when we both return to NY.

Cheers,
Sean