Q. What level of statistical significance does Dr. Booth believe is sufficient for determining whether a regression coefficient is not equal to zero?

A. Statistically we look at 1%, 5% and 10% confidence intervals for whether the T statistics estimate the probability of a value being different from zero. Which value we use depends on the problem we are looking at, how many observations we have and our understanding of the problem. For example the T statistic is simply the coefficient divided by the standard error since we are testing relative to zero. However, the standard error is the standard deviation divided by the square root of the number of observations. As a result, all else constant, more observations implies better T statistics, so Dr. Booth would not apply the same significance level to 40 annual data points as he would 10,000 daily data points even though they both cover 40 years of data.

Generally Dr. Booth does not believe in relying on statistics since he has seen too many results produced from tortured data. Instead, he relies on basic economics and understanding what happened during the period under question. For the reasons given above and in his testimony this means looking at trends and to understanding what generated estimated values rather then simply looking at statistics.

For example for the new utility index in the TSX/S&P the following are the results for the OLS regression model:

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.321 182					
R Square	0.103158					
Adjusted R						
Square	0.099571					
Standard Error	3.64 196					
Observations	252					

ANOVA

	df	00	140	-	Significance
	u		<u>IMS</u>	<u> </u>	F
Regression	1	381.4153	381.4153	28.75595	1.87E-07
Residual	250	3315.968	13.26387		
Total	251	3697.383			

		Standard				Upper	Lower	Upper
	Coefficients	Error	t Stat	P-value	Lower 95%	95%	95.0%	95.0%
Intercept	0.690845	0.232546	2.970791	0.00326	0.232846	1.148844	0.232846	1.148844
X Variable 1	0.286843	0.053491	5.362458	1.87E-07	0.181493	0.392193	0.181493	0.392193

where X, the independent variable, is the return on the market. This indicates that over this long period the beta coefficient is 0.29 and highly unlikely to be zero, that is, utilities have market risk. However, whether this reflects a reasonable estimate going forward depends on whether you think the events that happened during the estimation period since December 1987 will identically repeat themselves and whether this beta estimate has been constant over the estimation period. From the graph in Schedule 14 Dr. Booth believes that both these assumptions are highly unlikely and would place no weight on this significant statistical estimate.