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Current Research on Cost of Capital

The Equity Risk Premium in 2016

John R. Graham, Campbell R. Harvey

Research question:

How has the Equity Risk Premium developed and does it reflect CFO forecasts?

Sample:

The risk premium results are linked to survey-based measures of the WACC and investment hurdle rates. The surveys take place since 1996 with CFOs around the world.

Results:

- Relatively little time variation of risk premia, largest variance observable during recessions and periods of uncertainty.
 - Using the risk premia from the survey results for an imputation of the WACC yields significantly higher cost of capital than CFOs report.
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The Market Portfolio is NOT efficient: Evidences, consequences and easy to avoid errors

Pablo Fernandez, José Paulo Carelli, Alberto Ortiz

Research question:

Have equal weighted indices and easy-to-build portfolios beaten market-value-weighted indices?

Sample:

S&P500, MSCI Emerging Markets, FTSE100, MSCI World, MSCI, DAX 30, IBEX 35

Results:

- The market portfolio is not efficient:
Return of the equal-weighted portfolio is almost always higher than that of portfolios based on mean-variance optimization
 - ⇒ For individual investors easy-to-implement allocation guidelines are suggested
 - Volatility and beta are bad measures of risk:
Investors often like volatility and don't see it as a risk itself
 - ⇒ The true risks e.g. bankruptcy should be outlined
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Cost of Capital Q1 2016

Prime All Share Industries, DAX 30, TecDAX 30, MDAX 50

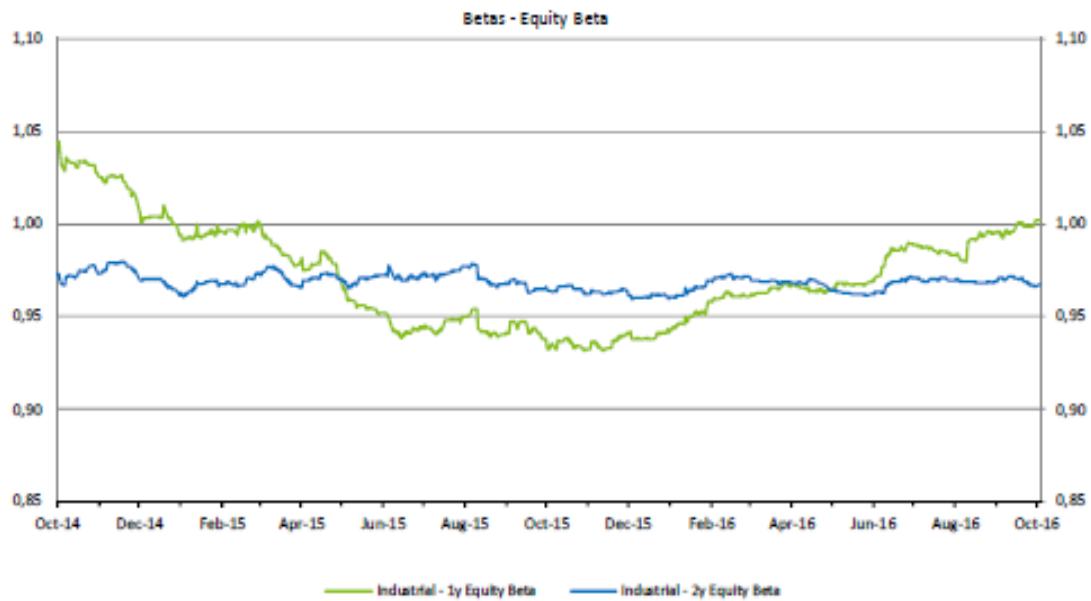
as of 15.01.2016

	1 year Equity Beta	R ²	2 year Equity Beta	R ²	5 year Equity Beta	R ²	n	Cost of Equity (based on 1y beta)	Debt - Equity ratio (market values)	Asset beta	Asset Beta Miles Ezzell debt beta = 0.3	Net-Debt - Equity ratio (market values)	Operating Asset beta	Operating Asset beta Miles Ezzell debt beta=0.3
Automobiles	1,22	0,81	1,20	0,82	1,35	0,76	15	7,2%	1,84	0,55	0,60	1,47	0,62	0,65
Banks	1,07	0,66	1,10	0,64	1,25	0,53	6	6,4%						
Basic Resources	0,85	0,42	0,91	0,44	0,79	0,46	4	5,2%	1,19	0,48	0,53	0,76	0,57	0,60
Chemicals	1,12	0,93	1,14	0,92	1,05	0,87	14	6,6%	0,43	0,88	0,88	0,37	0,90	0,90
Construction	0,95	0,71	0,97	0,65	1,11	0,66	4	5,7%	0,82	0,62	0,64	0,56	0,69	0,70
Consumer	0,84	0,77	0,79	0,69	0,77	0,62	24	5,1%	0,16	0,76	0,77	0,02	0,83	0,83
Financial Services	0,80	0,75	0,73	0,71	0,73	0,65	29	4,9%						
Food & Beverages	0,35	0,03	0,48	0,05	0,11	0,00	2	2,4%	0,97	0,21	0,29	0,72	0,24	0,30
Industrial	0,94	0,91	0,96	0,89	1,02	0,89	73	5,7%	0,51	0,71	0,72	0,30	0,79	0,79
Insurance	0,85	0,83	0,83	0,79	0,98	0,76	4	5,1%						
Media	0,76	0,70	0,75	0,63	0,76	0,59	13	4,7%	0,19	0,68	0,68	0,14	0,70	0,70
Pharma & Healthcare	0,95	0,77	0,86	0,70	0,56	0,54	32	5,7%	0,30	0,80	0,80	0,16	0,86	0,86
Retail	0,67	0,64	0,69	0,61	0,77	0,52	22	4,2%	0,47	0,51	0,54	0,10	0,63	0,63
Software	0,84	0,77	0,88	0,71	0,81	0,60	32	5,1%	0,10	0,78	0,79	0,03	0,82	0,82
Technology	1,05	0,56	1,03	0,55	0,99	0,47	22	6,2%	0,20	0,93	0,92	0,01	1,04	1,04
Telecommunication	1,11	0,79	1,07	0,73	0,77	0,45	8	6,6%	0,68	0,77	0,77	0,54	0,82	0,82
Transport. & Logistics	0,84	0,69	0,93	0,70	0,94	0,71	11	5,1%	0,73	0,57	0,60	0,54	0,62	0,64
Utilities	1,05	0,41	1,05	0,45	1,17	0,45	4	6,2%	3,30	0,33	0,43	2,29	0,42	0,49
Prime All Share	1,00	1,00	1,00	1,00	1,00	1,00	318	6,0%	0,76	0,67	0,69	0,57	0,73	0,74
DAX 30	1,04	1,00	1,05	0,99	1,05	0,99	30	6,2%	0,76	0,70	0,71	0,60	0,75	0,76
TecDAX 30	0,88	0,81	0,90	0,76	0,67	0,58	30	5,3%	0,13	0,82	0,82	0,03	0,87	0,87
MDAX 50	0,85	0,92	0,83	0,89	0,84	0,85	50	5,1%	0,40	0,67	0,68	0,21	0,75	0,75

	Median ROE (Return on Equity)	Median Non-cash ROE (Return on Equity)	Median ROC (Return on Capital)	Median Non-cash ROC (Return on Capital)	Median Capex / Depr.	Median Dividend payout
Automobiles	0,18	0,12	0,09	0,11	1,26	0,29
Banks					0,65	0,11
Basic Resources	0,05	0,06	0,05	0,05	0,78	0,35
Chemicals	0,13	0,07	0,09	0,11	1,17	0,48
Construction	0,03	0,04	0,06	0,07	1,01	0,21
Consumer	0,12	0,07	0,09	0,10	1,08	0,49
Financial Services	0,02		0,03		2,53	0,41
Food & Beverages	0,05	0,03	0,05	0,07	4,71	4,30
Industrial	0,12	0,07	0,09	0,11	0,87	0,35
Insurance					1,69	0,42
Media	0,09	0,10	0,07	0,08	0,41	0,40
Pharma & Healthcare	0,04	0,04	0,02	0,04	0,70	0,36
Retail	0,06	0,05	0,05	0,04	0,87	0,30
Software	0,14	0,08	0,12	0,14	0,69	0,33
Technology	0,04	0,03	0,05	0,07	0,74	0,24
Telecommunication	0,02	0,04	0,02	0,02	0,53	0,44
Transport. & Logistics	0,16	0,07	0,08	0,08	0,82	0,48
Utilities	0,02	0,04	0,04	0,04	1,43	0,72
Prime All Share	0,09	0,06	0,07	0,09	0,87	0,36
DAX 30	0,18	0,10	0,09	0,11	1,33	0,42
TecDAX 30	0,13	0,09	0,11	0,14	0,51	0,36
MDAX 50	0,13	0,09	0,09	0,12	0,96	0,40

Development of CAPM Beta Factors - Industrial

1 year vs. 2 year CAPM Equity Beta



1 year vs. 2 year CAPM R²

