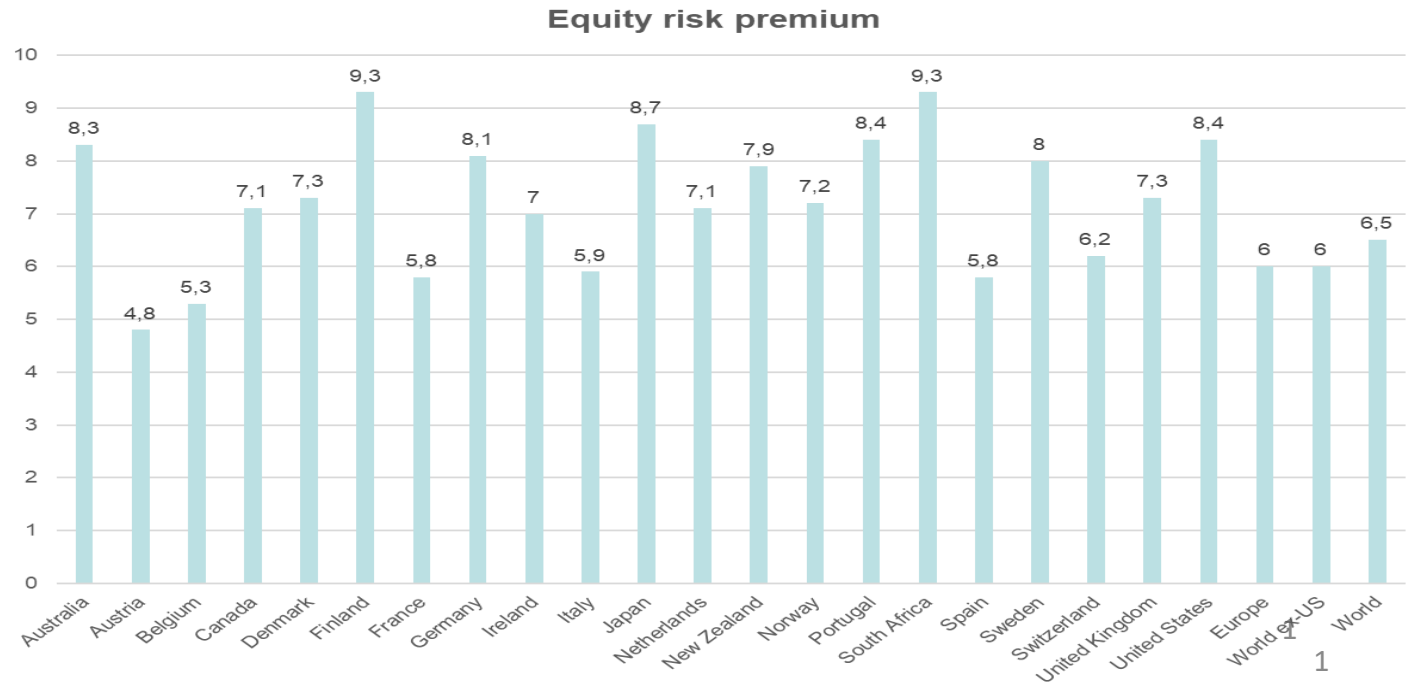


Table 2. Market Risk Premium (MRP) used for 59 countries in 2018

MRP	Number of Answers	Average	St. Dev.	Median	MAX	min	St.Dev. / Average
USA	1348	5,4%	1,7%	5,2%	17,8%	1,3%	32,1%
Spain	675	6,7%	2,4%	6,2%	20,0%	0,8%	36,2%
Germany	528	5,3%	1,7%	5,2%	15,2%	1,0%	32,5%
Argentina	73	13,9%	4,7%	16,3%	20,2%	1,9%	34,3%
Australia	74	6,6%	1,4%	7,1%	10,2%	3,3%	20,8%
Austria	56	6,2%	0,7%	6,4%	7,2%	4,2%	10,5%
Belgium	53	6,2%	0,8%	6,4%	7,2%	3,3%	12,5%
Bolivia	6	6,6%	2,9%	6,6%	9,4%	3,8%	43,3%
Brazil	100	8,4%	2,3%	8,6%	15,2%	2,3%	26,9%
Bulgaria	8	7,5%	1,3%	7,7%	9,5%	5,0%	16,8%
Canada	77	5,8%	0,7%	6,0%	7,2%	4,1%	12,7%
Chile	72	6,1%	1,1%	6,2%	8,2%	3,1%	17,7%
China	95	6,3%	2,8%	7,0%	13,2%	0,6%	43,4%
Colombia	72	8,7%	3,7%	7,9%	25,2%	3,8%	42,6%
Czech Republic	63	5,9%	0,7%	6,0%	8,2%	4,8%	12,3%
Denmark	53	6,0%	0,8%	6,2%	7,2%	3,8%	12,9%
Ecuador	7	9,0%	3,5%	8,0%	12,8%	5,5%	38,7%
Egypt	9	10,9%	4,5%	12,6%	15,2%	4,8%	41,6%
Estonia	7	5,1%	1,0%	5,2%	6,1%	3,0%	20,4%
Finland	53	5,9%	0,8%	6,0%	7,2%	3,8%	13,0%
France	83	5,9%	1,6%	6,4%	8,8%	1,3%	27,3%
Greece	42	15,8%	3,1%	16,9%	18,2%	6,8%	19,7%
Hong Kong	21	5,8%	1,0%	6,0%	7,2%	3,8%	16,8%
Hungary	42	7,9%	1,2%	8,4%	9,0%	4,8%	15,5%
India	64	7,9%	2,1%	8,3%	13,7%	2,3%	26,7%
Indonesia	39	8,8%	1,0%	9,0%	11,9%	5,0%	11,8%
Iran	15	22,1%	25,4%	8,0%	70,2%	4,8%	115,1%
Ireland	49	6,5%	0,6%	6,7%	7,2%	4,2%	9,7%
Israel	51	5,8%	1,3%	6,4%	7,0%	2,8%	21,6%
Italy	108	6,1%	1,2%	6,4%	10,0%	2,1%	20,0%
Japan	57	5,7%	2,6%	5,9%	12,0%	0,3%	45,4%
Korea (South)	48	6,4%	1,0%	6,6%	8,2%	3,2%	15,8%
Malaysia	10	7,1%	1,5%	6,6%	10,0%	5,0%	20,8%
Mexico	123	8,5%	3,5%	8,0%	20,2%	2,8%	40,5%
Netherlands	81	5,8%	0,7%	6,0%	6,8%	3,5%	11,6%
New Zealand	42	5,8%	0,9%	5,8%	9,5%	4,6%	15,0%
Norway	52	5,7%	0,9%	6,1%	6,8%	3,8%	15,0%
Pakistan	9	11,5%	3,9%	12,6%	15,5%	6,3%	34,1%
Panama	14	8,4%	2,5%	7,4%	12,2%	5,6%	29,4%
Peru	91	7,3%	2,8%	7,6%	20,2%	2,8%	38,9%
Philippines	6	5,1%	2,4%	5,6%	7,5%	2,0%	47,4%
Poland	64	6,0%	1,3%	6,3%	9,2%	1,3%	21,2%
Portugal	58	7,2%	1,2%	7,7%	8,4%	3,4%	17,3%
Qatar	10	6,9%	1,2%	6,9%	9,0%	5,0%	17,6%
Romania	31	7,0%	1,8%	6,9%	10,2%	3,8%	26,4%
Russia	61	8,7%	3,2%	8,0%	20,2%	3,8%	37,4%
Singapore	10	5,2%	1,5%	5,2%	7,2%	3,2%	28,6%
Slovakia	9	6,6%	1,1%	6,1%	8,2%	5,4%	17,0%
Slovenia	16	7,2%	0,8%	7,1%	8,7%	5,8%	11,7%
South Africa	40	6,9%	1,7%	7,6%	8,2%	2,8%	24,0%
Sri Lanka	6	8,0%	2,5%	8,1%	10,5%	5,6%	30,7%
Sweden	58	7,1%	1,6%	6,9%	11,2%	2,9%	22,8%
Switzerland	43	6,9%	1,0%	7,2%	7,9%	4,0%	14,3%
Taiwan	30	4,9%	1,5%	5,6%	6,8%	1,8%	31,3%

Time period	Stock return		Government bond return	
	Mean (1)	Standard deviation (2)	Mean (1)	Standard deviation (2)
1861-1994 ⁽³⁾	6.72 / 3.32	26.50	1.03 / -0.12	13.68
1861-1870	11.15 / 10.34	13.93	5.89 / 4.46	8.25
1871-1880	11.94 / 9.41	26.24	10.09 / 9.44	12.72
1881-1890	4.35 / 3.99	9.18	7.17 / 7.00	6.46
1891-1900	4.65 / 3.44	17.10	6.46 / 6.37	4.61
1901-1910	6.66 / 6.40	7.95	3.94 / 3.90	3.03
1911-1920	-6.27 / -7.36	14.24	-10.93 / -11.84	13.15
1921-1930	11.94 / 6.06	37.44	5.02 / 4.19	13.56
1931-1940	12.69 / 11.05	20.19	3.96 / 3.20	13.32
1941-1950	2.95 / -10.67	53.64	-22.01 / -26.62	25.92
1951-1960	22.40 / 20.96	20.68	2.24 / 2.19	3.42
1961-1970	-2.88 / -4.10	15.96	0.15 / 0.11	3.17
1971-1980	0.65 / -4.37	35.63	-5.06 / -5.35	7.66
1981-1994	6.93 / 2.59	33.08	6.45 / 5.76	7.30



Indice utilizzato	Beta calcolato
Dow 30	0,99
S&P 500	1,13
NYSE Composite	1,14
Wilshire 5000	1,05
MS Capital Index	1,06

Periodo di tempo utilizzato	Beta stimato
3 anni	1,04
5 anni	1,13
7 anni	1,09
10 anni	1,18

Intervallo di rendimento utilizzato	Beta stimato
Giornaliero	1,33
Settimanale	1,38
Mensile	1,13
Trimestrale	0,44
Annuale	0,77

Service	Time horizon	Data frequency	Adjustment	Underlying index
Alcar	5 years	Monthly	Bayesian	S&P 500
Barra	Variable	Monthly	Barra risk model (forward looking)	Variable
Bloomberg	Variable (2 year default)	Variable (weekly default)	Blume's	Variable (S&P 500 default)
Capital IQ	Variable (2 year default)	Weekly/Monthly	None	8 domestic (S&P 500 default)
Compustat	5 years	Monthly	None	S&P 500
Damodaran	5 years	Monthly	None	Local (NYSE for US)
Datastream	2½ years	Monthly	Bayesian	Datastream total market
Ibbotson	5 years	Monthly	Towards peer group, weighted by statistical significance	S&P 500
Merrill Lynch	5 years	Monthly	Bayesian*	S&P 500
Reuters	5 years (2 minimum)	Monthly	N/A	S&P 500
S&P	5 years	Monthly	None	S&P 500
Value Line	5 years	Weekly	Blume's**	NYSE composite

	Bloomberg Betas		Value Line Betas	S&P Betas	Range
	Raw	Adjusted			Max. - Min.
Advanced Micro	1.20	1.13	1.70	1.47	0.57
Allergan	0.94	0.96	1.30	1.36	0.42
Black & Decker	1.06	1.04	1.65	1.78	0.74
Cellular One			Not Listed		
Chevron	0.70	0.80	0.70	0.68	0.12
Colgate-Palmolive	1.11	1.07	1.20	0.87	0.33
Comdisco	1.50	1.34	1.35	1.20	0.30
Compaq	1.26	1.18	1.50	1.55	0.37
Eastman Kodak	0.54	0.69	NMF	0.37	0.32
Gillette	0.93	0.95	1.25	1.30	0.37
Guardian Industries			Not Listed		
Henkel			Not Listed		
Hewlett-Packard	1.34	1.22	1.40	1.96	0.74

A

	Beta	Debito (mil. di \$)	Capitale netto (mil. \$)	D/W	Beta unlevered
<i>Barnes Noble</i>	0,885	300	1.606	0,19	0,796
<i>John Wiley & Sons</i>	0,636	236	1.662	0,14	0,586
<i>Borders Group</i>	0,844	182	1.430	0,13	0,784
				beta unlevered di settore	0,722

B

TABLE 2
Industry Differentials in Beta^a

Industry	Average Industry Values of Beta	Industry Risk Differences Not Explained by Other Fundamental Firm Characteristics ^b Adjustment to Beta
Nonferrous metals	.99	-.142***
Energy raw materials	1.22	-.030
Construction	1.27	.062
Agriculture, food	.99	-.140***
Liquor	.89	-.165***
Tobacco	.80	-.279***
Apparel	1.27	.019
Forest products, paper	1.16	-.016
Containers	1.01	-.140**
Media	1.39	.124*
Chemicals	1.22	.011
Drugs, medicine	1.14	-.099***
Soaps, cosmetics	1.09	-.067*
Domestic oil	1.12	-.103*
International oil	.85	-.143*
Tires, rubber goods	1.21	.050
Steel	1.02	-.066*
Producer goods	1.30	.043
Business machines	1.43	.065
Consumer durables	1.44	.132*
Motor vehicles	1.27	.045
Aerospace	1.30	.020
Electronics	1.60	.155**
Photographic, optical	1.24	.026
Nondurables, entertainment	1.47	.042
Trucking, freight	1.31	.098
Railroads, shipping	1.19	.030
Air transport	1.80	.348***
Telephone	.75	-.288***
Energy, utilities	.60	-.237***
Retail, general	1.43	.073
Banks	.81	-.242***
Miscellaneous finance	1.60	.210**
Insurance	1.34	.103
Real property	1.70	.339***
Business services	1.28	.029
Travel, outdoor recreation	1.66	.186**
Gold	.36	-.827***
Miscellaneous, conglomerate	1.14	.089*

Flow show

Pimco Total Return fund

Estimated net flow (\$bn)

Sep 2008 Lehman collapse sparks wave of new regulation while introduction of QE begins pushing investors out of cash and into bonds

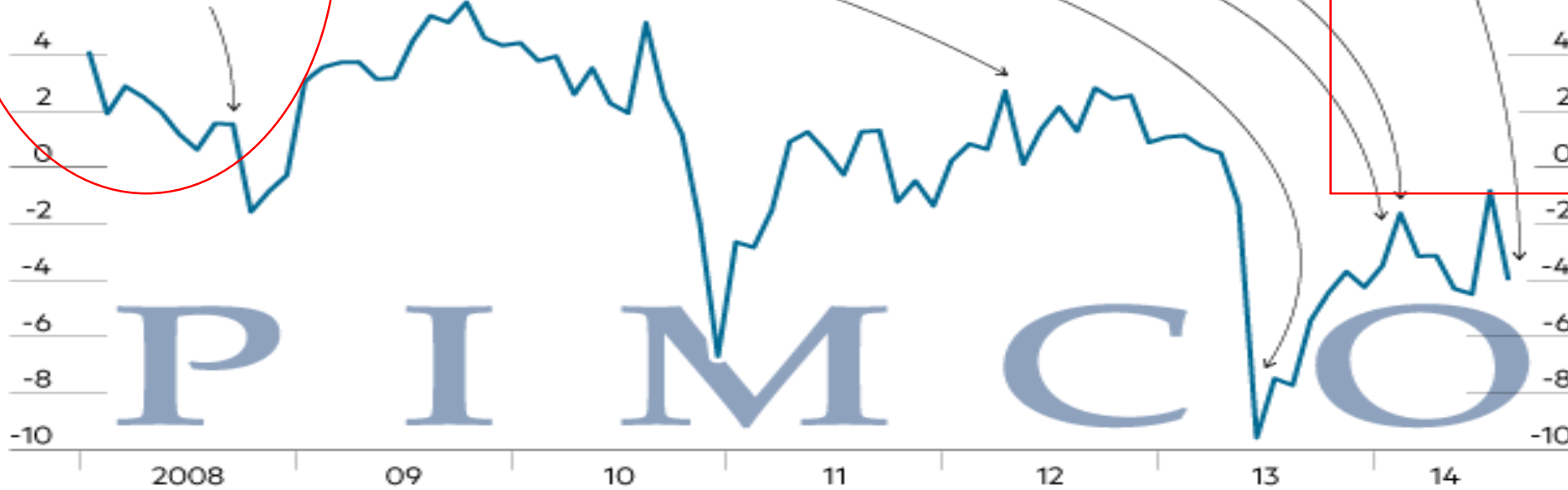
Apr 2012 Study commissioned of relationship between asset managers and financial stability

Jun 2013 Taper tantrum sparks outflows

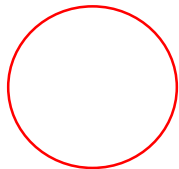
Jan 2014 Mohamed El-Erian resigns as Pimco chief executive

Feb 2014 Fed paper claims asset managers can spark a wider sell-off in markets

Sep 2014 Bill Gross jumps from Pimco to Janus Capital



Source: Morningstar



= rischio sistematico



= rischio specifico

A

Beta dei portafogli per differenti periodi di tempo

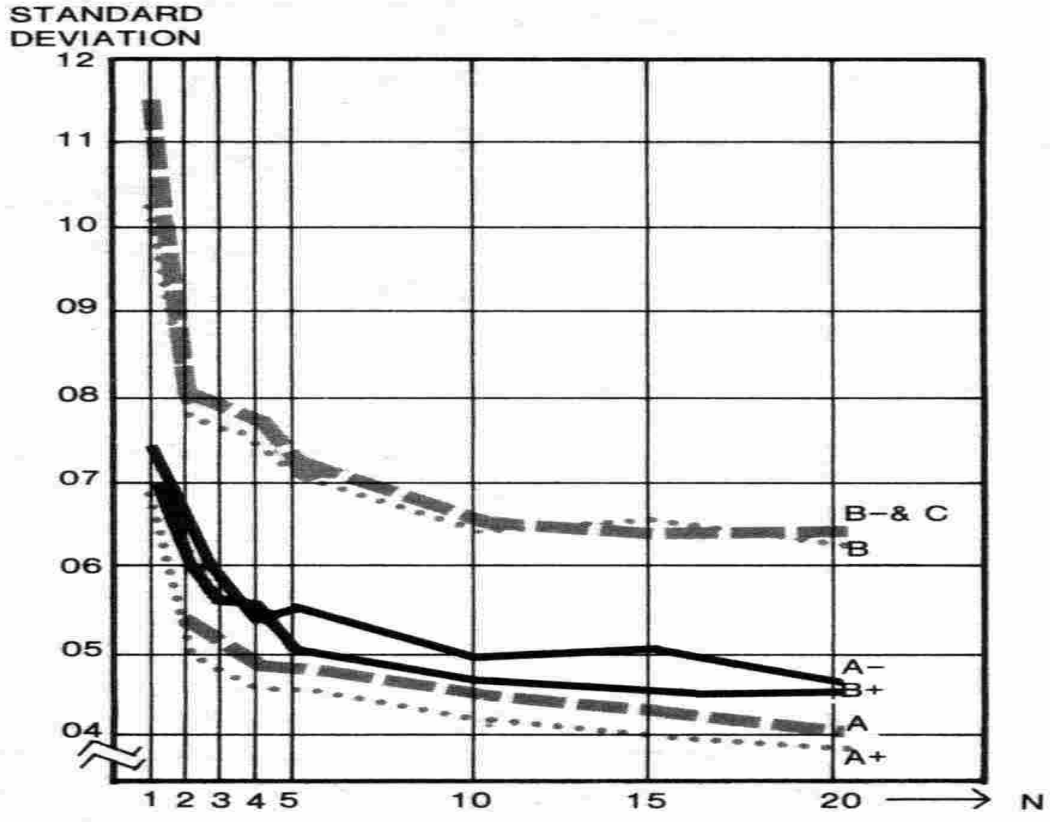
Portafoglio	luglio 1947- giugno 1954	luglio 1954- giugno 1961	luglio 1961- giugno 1968
1	0,36	0,57	0,72
2	0,61	0,71	0,79
3	0,78	0,88	0,88
4	0,91	0,96	0,92
5	1,01	1,03	1,04
6	1,13	1,13	1,02
7	1,26	1,24	1,08
8	1,47	1,32	1,15

S&P 500	12/17
Nasdaq 100	13/17
Dj Eurostoxx 50	8/13
Dow Jones Industrial	10/17
Wilshire 250 Small Cap	12/17
Comit	11/17

C**B**

<i>Settore industriale</i>	<u>Modello a tre fattori</u>			<u>CAPM</u>	<i>Premio per il rischio con CAPM</i>	<i>Premio per il rischio con il modello a tre fattori</i>
	b	s	h	beta		
Drugs	0,84	-0,25	-0,63	0,92	4,71	0,09
Computer	0,90	0,17	-0,49	1,04	5,29	2,49
Health care	1,24	0,93	-0,19	1,56	7,95	6,14
Medical equip.	0,99	0,84	-0,25	1,17	5,99	2,64
Chips	1,15	0,69	-0,39	1,38	7,04	6,01
Laboratory eqp.	1,13	0,49	-0,29	1,29	6,59	5,80
Mines	0,91	0,53	0,23	0,98	4,99	7,65
Textiles	1,03	0,71	0,30	1,12	5,71	9,18
Banking	1,13	0,13	0,35	1,09	5,55	8,08
Real estate	1,01	1,18	0,40	1,17	5,99	11,16
Telecom	0,79	-0,23	0,35	0,66	3,39	5,17
Steel	1,17	0,40	0,43	1,16	5,94	9,61
Autos	1,10	0,17	0,60	1,01	5,13	9,39
Chemical	1,13	-0,03	0,17	1,09	5,57	6,58
Gold	0,71	0,40	0,08	0,78	3,98	5,35
Energy	0,96	-0,35	0,21	0,85	4,32	4,93
Guns	0,95	0,41	0,01	1,04	5,29	6,25
Business Serv.	1,13	0,49	-0,29	1,34	6,83	6,51
Construction	1,21	0,21	-0,09	1,28	6,52	6,42
Retails	1,04	0,27	-0,06	1,11	5,68	5,65
Meals	1,12	0,74	-0,24	1,32	6,75	6,81

**EXHIBIT 4
STANDARD DEVIATION VERSUS
NUMBER OF ISSUES IN PORTFOLIO**



Source: Wagner and Lau [27], Exhibit 1, p.50.