

Equity, Commodities and Funds relative changes (%)				
Risk factor category	GEO	Country	Index name	Shock
Equity	EU	Austria	Austrian Traded Index	-48
Equity	EU	Belgium	Belgium BEL 20 Index	-50
Equity	EU	Bulgaria	Bulgaria Stock Exchange SOFIX Index	-46
Equity	EU	Croatia	Zagreb Stock Exchange CROBEX Index	-45
Equity	EU	Cyprus	Cyprus Market Index	-62
Equity	EU	Czech Republic	Prague Stock Exchange Index	-48
Equity	EU	Denmark	Nordic Exchange OMX Copenhagen 20 Index	-40
Equity	EU	Estonia	Nordic Exchange OMX Tallinn (OMXT) Index	-50
Equity	EU	Finland	Nordic Exchange OMX Helsinki Price Index	-59
Equity	EU	France	France CAC 40 Index	-49
Equity	EU	Germany	DAX 40 Performance Index	-44
Equity	EU	Greece	Athens Stock Exchange Main General Index	-61
Equity	EU	Hungary	Budapest Stock Exchange BUX Index	-66
Equity	EU	Ireland	Irish Stock Exchange ISEQ Overall Index	-65
Equity	EU	Italy	FTSE Milan Stock Exchange MIB	-55
Equity	EU	Latvia	Nordic Exchange OMX Riga (OMXR) Index	-65
Equity	EU	Lithuania	Nordic Exchange OMX Vilnius General Index	-43
Equity	EU	Luxembourg	Luxembourg Stock Exchange LuxX Index	-63
Equity	EU	Malta	Malta Stock Exchange Index	-49
Equity	EU	Netherlands	Amsterdam Exchange (AEX) Index	-46
Equity	EU	Poland	Warsaw Stock Exchange General Index	-52
Equity	EU	Portugal	Portugal PSI-20 Index	-45
Equity	EU	Romania	Romania BET 10 Index	-55
Equity	EU	Slovakia	Bratislava Stock Exchange SAX Index	-46
Equity	EU	Slovenia	Slovenian Blue Chip Index (SBI TOP)	-44
Equity	EU	Spain	Spain IBEX 35 Index	-51
Equity	EU	Sweden	Nordic Exchange OMX Stockholm 30 Index	-51
Equity	EU	Dividend EU	EURO STOXX Select Dividend 30	-50
Equity	Rest of Europe	UK	Financial Times Stock Exchange (FTSE) Ordinary Share Index	-52
Equity	Rest of Europe	Norway	Oslo Exchange All Share Index	-42
Equity	Rest of Europe	Switzerland	Swiss Exchange SWX Swiss Market Index	-43
Equity	Rest of Europe	Rest of Europe		-80
Equity	Western Asia	Western Asia		-70
Equity	North America (excl. US)	North America (excl. US)	Standard and Poors/TSX Composite Index	-35
Equity	North America	US	Standard and Poors 500 Index	-61
Equity	North America	Dividend North America	Dow Jones U.S. Select Dividend Index	-50
Equity	Oceania	Oceania		-40
Equity	Latin America and the Caribbean	Latin America and the Caribbean		-66
Equity	Central and Southern Asia (incl. Russian Federation)	Central and Southern Asia (incl. Russian Federation)		-61
Equity	Eastern and South-eastern Asia	Eastern and South-eastern Asia		-43
Equity	Africa	Africa		-61
Funds			Bond funds	-11
Funds			Equity funds	-45
Funds			Mixed funds	-21
Funds			Private Equity funds	-50
Funds			Money Market funds	-2
Funds			Pension funds	-22
Funds			Hedge funds	-22
Funds			Real Estate funds	-44
Funds			Other funds	-27
Commodities	Global	Oil Crude Brent	BRENT CRUDE FUTR	57
Commodities	Global	Natural Gas	NATURAL GAS FUTR	65
Commodities	Global	Agricultural		23
Commodities	Global	Metals		48
Commodities	Global	Other Commodities		23

**Interest rate yield shocks**  
absolute changes (basis points)

GEO	Country	Description	3M	1Y	5Y	10Y
EU	Euro Area	Interest rate SWAP on the EUR (Euro)	127	115	97	79
EU	Bulgaria	Interest rate SWAP on the BGN (Bulgarian lev)	159	155	133	107
EU	Czech Republic	Interest rate SWAP on the CZK (Czech Koruna)	152	146	113	72
EU	Denmark	Interest rate SWAP on the DKK (Danish Krone)	133	128	100	66
EU	Hungary	Interest rate SWAP on the HUF (Hungarian Forint)	159	155	133	107
EU	Poland	Interest rate SWAP on the PLN (Polish Zloty)	152	147	121	89
EU	Romania	Interest rate SWAP on the RON (Romanian Leu)	152	148	126	98
EU	Sweden	Interest rate SWAP on the SEK (Swedish Krona)	122	119	102	80
Rest of Europe	United Kingdom	Interest rate SWAP on the GBP (British Pound)	118	76	84	74
Rest of Europe	Norway	Interest rate SWAP on the NOK (Norwegian Krone)	90	89	87	84
Rest of Europe	Switzerland	Interest rate SWAP on the CHF (Swiss Franc)	52	34	39	30
Rest of Europe	Rest of Europe		271	154	314	160
Western Asia	Western Asia		271	154	314	160
North America (excl. US)	North America (excl. US)	Interest rate SWAP on the CAD (Canadian Dollar)	138	165	187	77
North America	US	Interest rate SWAP on the USD (US Dollar)	156	121	88	86
Latin America and the Caribbean	Latin America and the Caribbean		179	189	197	152
Central and Southern Asia (incl. Russian Federation)	Central and Southern Asia (incl. Russian Federation)		135	130	130	98
Eastern and South-eastern Asia	Eastern and South-eastern Asia		151	151	164	129
Oceania	Oceania		139	129	137	77
Africa	Africa		153	189	206	137

FX shocks relative changes (%)			
GEO	Description	Exchange rate name	Shock
EU	Exchange rate from Euro to Czech Koruna	EURCZK	7.4
EU	Exchange rate from Euro to Swedish Krona	EURSEK	0.0
EU	Exchange rate from Euro to Hungarian Forint	EURHUF	16.7
EU	Exchange rate from Euro to Polish Zloty	EURPLN	9.4
EU	Exchange rate from Euro to Romanian Leu	EURRON	3.7
Rest of Europe	Exchange rate from Euro to British Pound	EURGBP	0.0
Rest of Europe	Exchange rate from Euro to Swiss Frank	EURCHF	0.0
Rest of Europe	Exchange rate from Euro to Russian Ruble	EURRUB	64.8
Rest of Europe	Exchange rate from Euro to Turkish Lira	EURTRY	36.5
North America	Exchange rate from Euro to Canadian Dollar	EURCAD	0.0
North America	Exchange rate from Euro to US Dollar	EURUSD	0.0
Latin America and the Caribbean	Exchange rate from Euro to Brazilian Real	EURBRL	13.4
Latin America and the Caribbean	Exchange rate from Euro to Mexican Peso	EURMXN	8.9
Asia	Exchange rate from Euro to Chinese Yuan	EURCNY	0.0
Asia	Exchange rate from Euro to Hong Kong Dollar	EURHKD	0.0
Asia	Exchange rate from Euro to Indian Rupee	EURINR	14.6
Asia	Exchange rate from Euro to Japanese Yen	EURJPY	0.0
Asia	Exchange rate from Euro to Singapore Dollar	EURSGD	6.0
Africa	Exchange rate from Euro to South African Rand	EURZAR	14.2
Other FX			17.0

Note: EURDKK and EURBGN rates are assumed to remain unchanged.

Sovereign credit spreads absolute changes (basis points)							
GEO	Country	Reference swap rate	3M	1Y	5Y	10Y	15Y
EU	Austria	EUR	43	23	21	31	49
EU	Belgium	EUR	43	23	21	31	49
EU	Bulgaria	BGN	143	141	140	151	158
EU	Croatia	EUR	136	106	109	112	132
EU	Cyprus	EUR	136	106	109	112	132
EU	Czech republic	CZK	43	23	29	38	52
EU	Denmark	DKK	43	23	21	44	51
EU	Estonia	EUR					
EU	Finland	EUR	43	23	21	31	49
EU	France	EUR	136	106	109	112	132
EU	Germany	EUR	43	23	21	31	49
EU	Greece	EUR	175	181	176	179	197
EU	Hungary	HUF	143	141	140	151	158
EU	Ireland	EUR	43	23	21	31	49
EU	Italy	EUR	175	181	176	179	197
EU	Latvia	EUR	43	23	21	31	49
EU	Lithuania	EUR	136	106	109	112	132
EU	Luxembourg	EUR	43	23	21	31	49
EU	Malta	EUR	136	106	109	112	132
EU	Netherlands	EUR	43	23	21	31	49
EU	Poland	PLN	111	74	85	102	111
EU	Portugal	EUR	136	106	109	112	132
EU	Romania	RON	150	148	147	160	167
EU	Slovakia	EUR	136	106	109	112	132
EU	Slovenia	EUR	43	23	21	31	49
EU	Spain	EUR	175	181	176	179	197
EU	Sweden	SEK	48	19	16	30	37
Rest of Europe	UK	GBP	88	123	104	106	120
Rest of Europe	Norway	NOK	87	60	37	34	40
Rest of Europe	Switzerland	CHF	125	115	85	88	101
Rest of Europe	Rest of Europe		81	108	139	123	153
Western Asia	Western Asia		81	108	138	123	153
North America (excl US)	North America (excl US)	CAD	39	28	36	41	51
North America	US	USD	21	28	36	32	51
Latin America and the Caribbean	Latin America and the Caribbean		86	114	147	131	208
Central and Southern Asia (incl. Russian Federation)	Central and Southern Asia (incl. Russian Federation)		102	136	175	155	247
Eastern and South-eastern Asia	Eastern and South-eastern Asia		101	135	173	154	245
Oceania	Oceania		27	35	46	41	65
Africa	Africa		96	128	164	146	233

Corporate credit spreads absolute changes (basis points)					
GEO	Country	Type	Credit step 1 to 2 (ECAI)	Credit step 3 (ECAI)	Credit step 4 to 6 (ECAI)
EU	Austria	Financial	119	201	276
		Non-financial	108	154	228
	Belgium	Financial	119	201	276
		Non-financial	108	154	228
	Denmark	Financial	119	201	276
		Non-financial	108	154	228
	France	Financial	135	212	304
		Non-financial	124	189	271
	Germany	Financial	119	201	276
		Non-financial	108	154	228
	Italy	Financial	158	248	328
		Non-financial	163	233	358
	Netherlands	Financial	119	201	276
		Non-financial	108	154	228
	Spain	Financial	158	248	328
		Non-financial	163	233	358
	Sweden	Financial	119	201	276
		Non-financial	108	154	228
Others	UK	Financial	135	212	304
		Non-financial	124	189	271
Others	Others	Financial	130	213	292
		Non-financial	122	177	263

Corporate credit spreads indexes absolute changes (basis points)			
GEO	Country	Type	Shock
EU		Itraxx Overall	169
		Itraxx Crossover	365
		Itraxx High vol	250
		Itraxx Non financial	189
		Itraxx Financial	414
North America	US	Investment grade	157
		High yield	384
Asia		Investment grade	220
		High yield	447
Others	Others	Investment grade	182
		High yield	360

Covered bonds credit spreads absolute changes (basis points)		
GEO	Type	Shock
EU	1 to 2 (ECAI)	89
	3 (ECAI)	111
	4 to 6 (ECAI)	126
North America	1 to 2 (ECAI)	82
	3 (ECAI)	103
	4 to 6 (ECAI)	117
Asia	1 to 2 (ECAI)	115
	3 (ECAI)	144
	4 to 6 (ECAI)	164
Others	1 to 2 (ECAI)	95
	3 (ECAI)	119
	4 to 6 (ECAI)	136

Securitization credit spreads absolute changes (basis points)			
GEO	1 to 2 (ECAI)	3 (ECAI)	4 to 6 (ECAI)
EU	119	135	158
North America	110	125	147
Asia	155	176	206
Others	128	145	170

Global inflation shock absolute changes (basis points)					
GEO	3M	1Y	5Y	10Y	15Y
EU	100	260	98	20	20
US	93	372	140	29	29
Others	99	396	149	30	31

Liquidity and modelling uncertainty relative changes (%)		
GEO	Country	Shock
Global	Liquidity reserve	201
Global	Modelling uncertainty - L2	179
Global	Modelling uncertainty - L3	240



IR volatility shocks relative changes (%)						
GEO	Country	Description	1Mx1Y	1Yx1Y	5Yx5Y	10Yx10Y
EU	Euro Area	EUR (Euro) European Swaption Black Vol ATM Libor Discount	158	143	104	74
EU	Czech Republic	CZK (Czech Koruna) European Swaption Black Vol ATM Libor Discount	147	147	95	74
EU	Denmark	DKK (Danish Krone) European Swaption Black Vol ATM Libor Discount	158	143	104	74
EU	Hungary	HUF (Hungarian Forints) European Swaption Black Vol ATM Libor Discount	98	98	72	59
EU	Poland	PLN (Polish Zloty) European Swaption Black Vol ATM Libor Discount	131	131	72	59
EU	Sweden	SEK (Swedish Krona) European Swaption Black Vol ATM Libor Discount	127	118	89	53
Rest of Europe	United Kingdom	GBP (British Pound) European Swaption Black Vol ATM Libor Discount	113	108	87	63
Rest of Europe	Norway	NOK (Norwegian Krone) European Swaption Black Vol ATM Libor Discount	101	100	61	47
Rest of Europe	Switzerland	CHF (Swiss Franc) European Swaption Black Vol ATM Libor Discount	56	56	47	37
Western Asia	Turkey	TRY (Turkish Lira) European Swaption Black Vol ATM Libor Discount	190	206	107	107
North America (excl. US)	Canada	CAD (Canadian Dollar) European Swaption Black Vol ATM Libor Discount	101	100	87	75
North America	US	USD (US Dollar) European Swaption Black Vol ATM Libor Discount	169	136	108	70
Oceania	Australia	AUD (Australian Dollar) European Swaption Black Vol ATM Libor Discount	148	121	85	78
Latin America and the Caribbean	Mexico	MXN (Mexican Peso) European Swaption Black Vol ATM Libor Discount	190	206	107	107
Latin America and the Caribbean	Brasil	BRL (Brazilian Real) European Swaption Black Vol ATM Libor Discount	190	206	107	107
Eastern and South-eastern Asia	Hong Kong	HKD (Hong Kong Dollar) European Swaption Black Vol ATM Libor Discount	100	95	59	59
Eastern and South-eastern Asia	Japan	JPY (Japanese Yen) European Swaption Black Vol ATM Libor Discount	55	47	29	27
Africa	South Africa	ZAR (South African Rand) European Swaption Black Vol ATM Libor Discount	224	224	118	118
Others	Other countries		136	133	85	72

Equity volatility shocks					
relative changes (%)					
GEO	Country	Index name	3M	6M	12M
EU	EA	EURO STOXX 50 Volatility Index VSTOXX	233	208	180
Rest of Europe	UK	FTSE 100 Volatility Index	234	209	181
North America	US	Chicago Board Options Exchange SPX Volatility Index	231	206	179
Eastern and South-eastern Asia	Hong Kong	HSI Volatility Index	208	186	161
Eastern and South-eastern Asia	Japan	Nikkei Stock Average Volatility Index	181	162	140
Global	Emerging	JPMorgan Emerging Market Volatility Index (EM-VXY)	247	220	191
Others	Others		222	198	172

FX Implied volatility shocks relative changes (%)								
GEO	Description	Risk factor name	1M	3M	6M	1Y	2Y	5Y
EU	EURCZK ATM Implied Volatility	EURCZK	115	75	58	44	39	37
EU	EURHUF ATM Implied Volatility	EURHUF	107	74	59	48	42	38
EU	EURPLN ATM Implied Volatility	EURPLN	139	100	79	64	63	55
EU	EURRON ATM Implied Volatility	EURRON	187	139	116	102	92	99
EU	EURRSD ATM Implied Volatility	EURRSD	107	74	59	48	42	38
EU	EURSEK ATM Implied Volatility	EURSEK	97	81	67	54	50	51
Rest of Europe	EURGBP ATM Implied Volatility	EURGBP	115	109	105	81	42	32
Rest of Europe	EURCHF ATM Implied Volatility	EURCHF	224	166	179	144	63	50
North America (excl. US)	EURCAD ATM Implied Volatility	EURCAD	136	103	84	68	63	50
North America	EURUSD ATM Implied Volatility	EURUSD	120	92	80	67	62	50
Latin America and the Caribbean	EURARS ATM Implied Volatility	EURARS	156	104	86	66	60	37
Latin America and the Caribbean	EURBRL ATM Implied Volatility	EURBRL	156	104	86	66	60	37
Latin America and the Caribbean	EURMXN ATM Implied Volatility	EURMXN	198	158	121	96	86	56
Central and Southern Asia (incl. Russian Federation)	EURRUB ATM Implied Volatility	EURRUB	251	216	187	164	152	152
Central and Southern Asia (incl. Russian Federation)	EURINR ATM Implied Volatility	EURINR	136	82	67	53	50	57
Eastern and South-eastern Asia	EURCNY ATM Implied Volatility	EURCNY	93	70	58	54	46	47
Eastern and South-eastern Asia	EURHKD ATM Implied Volatility	EURHKD	167	94	79	66	60	55
Eastern and South-eastern Asia	EURJPY ATM Implied Volatility	EURJPY	175	125	101	80	68	41
Eastern and South-eastern Asia	EURKRW ATM Implied Volatility	EURKRW	102	75	61	53	51	47
Eastern and South-eastern Asia	EURMYR ATM Implied Volatility	EURMYR	124	83	66	50	46	42
Eastern and South-eastern Asia	EURSGD ATM Implied Volatility	EURSGD	163	123	99	82	75	51
Eastern and South-eastern Asia	EURTHB ATM Implied Volatility	EURTHB	122	91	76	64	58	55
Eastern and South-eastern Asia	EURTWD ATM Implied Volatility	EURTWD	137	101	80	64	56	43
Western Asia	EURTRY ATM Implied Volatility	EURTRY	207	132	96	100	66	57
Africa	EURZAR ATM Implied Volatility	EURZAR	142	90	65	48	46	29
Others		Others	147	106	88	73	62	52