

Equity, Commodities and Funds				
relative changes (%)				
Risk factor category	GEO	Country	Index name	Shock
Equity	EU	Austria	<i>Austrian Traded Index</i>	-52
Equity	EU	Belgium	<i>Belgium BEL 20 Index</i>	-48
Equity	EU	Bulgaria	<i>Bulgaria Stock Exchange SOFIX Index</i>	-53
Equity	EU	Croatia	<i>Zagreb Stock Exchange CROBEX Index</i>	-53
Equity	EU	Cyprus	<i>Cyprus Market Index</i>	-42
Equity	EU	Czech Republic	<i>Prague Stock Exchange Index</i>	-48
Equity	EU	Denmark	<i>Nordic Exchange OMX Copenhagen 20 Index</i>	-36
Equity	EU	Estonia	<i>Nordic Exchange OMX Tallinn (OMXT) Index</i>	-42
Equity	EU	Finland	<i>Nordic Exchange OMX Helsinki Price Index</i>	-40
Equity	EU	France	<i>France CAC 40 Index</i>	-46
Equity	EU	Germany	<i>DAX 30 Performance Index</i>	-41
Equity	EU	Greece	<i>Athens Stock Exchange Main General Index</i>	-56
Equity	EU	Hungary	<i>Budapest Stock Exchange BUX Index</i>	-47
Equity	EU	Ireland	<i>Irish Stock Exchange ISEQ Overall Index</i>	-45
Equity	EU	Italy	<i>FTSE Milan Stock Exchange MIB</i>	-51
Equity	EU	Latvia	<i>Nordic Exchange OMX Riga (OMXR) Index</i>	-37
Equity	EU	Lithuania	<i>Nordic Exchange OMX Vilnius General Index</i>	-39
Equity	EU	Luxembourg	<i>Luxembourg Stock Exchange LuxX Index</i>	-48
Equity	EU	Malta	<i>Malta Stock Exchange Index</i>	-33
Equity	EU	Netherlands	<i>Amsterdam Exchange (AEX) Index</i>	-42
Equity	EU	Poland	<i>Warsaw Stock Exchange General Index</i>	-45
Equity	EU	Portugal	<i>Portugal PSI-20 Index</i>	-47
Equity	EU	Romania	<i>Romania BET 10 Index</i>	-45
Equity	EU	Slovakia	<i>Bratislava Stock Exchange SAX Index</i>	-42
Equity	EU	Slovenia	<i>Slovenian Blue Chip Index (SBI TOP)</i>	-46
Equity	EU	Spain	<i>Spain IBEX 35 Index</i>	-50
Equity	EU	Sweden	<i>Nordic Exchange OMX Stockholm 30 Index</i>	-39
Equity	<i>Rest of Europe</i>	United Kingdom	<i>Financial Times Stock Exchange (FTSE) Ordinary Share Index</i>	-57
Equity	<i>Rest of Europe</i>	Norway	<i>Oslo Exchange All Share Index</i>	-44
Equity	<i>Rest of Europe</i>	Russia	<i>Russian Traded Index</i>	-64
Equity	<i>Rest of Europe</i>	Switzerland	<i>Swiss Exchange SWX Swiss Market Index</i>	-38
Equity	<i>Rest of Europe</i>	Turkey	<i>International Stock Exchange National 100 Index</i>	-54
Equity	<i>North America</i>	Canada	<i>Standard and Poors/TSX Composite Index</i>	-43
Equity	<i>North America</i>	US	<i>Standard and Poors 500 Index</i>	-55
Equity	<i>Australia and Pacific</i>	Australia	<i>Australian Stock Exchange All Ordinaries Index</i>	-32
Equity	<i>South and central America</i>	Argentina	<i>Buenos Aires Stock Exchange Merval Index</i>	-59
Equity	<i>South and central America</i>	Brazil	<i>Sao Paulo Stock Exchange Bovespa Index</i>	-54
Equity	<i>South and central America</i>	Mexico	<i>Mexico Stock Exchange (MXSE) IPC General Index</i>	-37
Equity	<i>Asia</i>	China	<i>Shanghai Stock Exchange Composite Index</i>	-48
Equity	<i>Asia</i>	Hong Kong	<i>Hong Kong Stock Exchange HANG SENG Index (HSI)</i>	-45
Equity	<i>Asia</i>	India	<i>Bombay Stock Exchange Sensitive Index</i>	-39
Equity	<i>Asia</i>	Japan	<i>Nikkei Index</i>	-43
Equity	<i>Asia</i>	Singapore	<i>Straits Times Index STI</i>	-32
Equity	EU	Dividend EU	<i>EURO STOXX Select Dividend 30</i>	-51
Equity	<i>North America</i>	Dividend North America	<i>Dow Jones U.S. Select Dividend Index</i>	-51
Equity	<i>Others</i>	Other countries	<i>Other countries index</i>	-46
Funds	EU	EU Private equity index	<i>LPX Europe Listed Private Equity Index PI</i>	-45
Funds	Global	Global Private Equity index		-50
Funds	EU	EU Hedge Fund Index	<i>db Hedge Fund Index</i>	-45
Funds	Global	Global Hedge Fund Index	<i>HFRU Global Hedge Fund Index</i>	-45
Funds	Global	Global Real Estate Investment Trusts Index		-49
Funds	<i>Others</i>	Other funds	<i>Other funds index</i>	-45
Commodities	Global	Oil Crude Brent	<i>BRENT CRUDE FUTR</i>	-30
Commodities	Global	Natural Gas	<i>NATURAL GAS FUTR</i>	-41
Commodities	Global	Agriculturals		-42
Commodities	Global	Metals	<i>Gold spot</i>	-31
Commodities	Global	Metals	<i>Silver spot</i>	-34
Commodities	Global	Metals	<i>Copper spot</i>	-46
Commodities	Global	Metals		-47
Commodities	<i>Others</i>	Other commodities		-40

FX shocks relative changes (%)			
GEO	Description	Exchange rate name	Shock
EU	EURCZK represents 1 EUR per x CZK (Czech Koruna)	EURCZK	15.4
EU	EURHRK represents 1 EUR per x HRK (Croatian Kuna)	EURHRK	5.0
EU	EURHUF represents 1 EUR per x HUF (Hungarian Forints)	EURHUF	22.9
EU	EURPLN represents 1 EUR per x PLN (Polish Zloty)	EURPLN	17.5
EU	EURRON represents 1 EUR per x RON (Romanian Leu)	EURRON	19.5
EU	EURRSD represents 1 EUR per x RSD (Serbian Dinar)	EURRSD	12.9
EU	EURSEK represents 1 EUR per x SEK (Swedish Krona)	EURSEK	14.5
Rest of Europe	EURGBP represents 1 EUR per x GBP (British Pound)	EURGBP	25.7
Rest of Europe	EURCHF represents 1 EUR per x CHF (Swiss Franc)	EURCHF	-12.0
Rest of Europe	EURNOK represents 1 EUR per x NOK (Norwegian Krone)	EURNOK	14.2
Rest of Europe	EURRUB represents 1 EUR per x RUB (Russian Ruble)	EURRUB	34.3
Rest of Europe	EURTRY represents 1 EUR per x TRY (Turkish Lira)	EURTRY	48.7
North America	EURCAD represents 1 EUR per x CAD (Canadian dollar)	EURCAD	16.4
North America	EURUSD represents 1 EUR per x USD (US Dollar)	EURUSD	15.6
South and central America	EURARS represents 1 EUR per x ARS (Argentine Peso)	EURARS	45.2
South and central America	EURBRL represents 1 EUR per x BRL (Brazilian Real)	EURBRL	36.5
South and central America	EURMXN represents 1 EUR per x MXN (Mexican Peso)	EURMXN	26.0
Asia	EURCNY represents 1 EUR per x CNY (Chinese Yuan Renminbi)	EURCNY	17.0
Asia	EURHKD represents 1 EUR per x HKD (Hong Kong Dollar)	EURHKD	17.0
Asia	EURINR represents 1 EUR per x INR (Indian Rupee)	EURINR	18.6
Asia	EURJPY represents 1 EUR per x JPY (Japanese Yen)	EURJPY	16.1
Asia	EURKRW represents 1 EUR per x KRW (South Korean Won)	EURKRW	30.5
Asia	EURMYR represents 1 EUR per x MYR (Malaysian Ringgit)	EURMYR	14.4
Asia	EURSGD represents 1 EUR per x SGD (Singapore Dollar)	EURSGD	15.6
Asia	EURTHB represents 1 EUR per x THB (Thai Baht)	EURTHB	21.2
Asia	EURTWD represents 1 EUR per x TWD (New Taiwan Dollar)	EURTWD	13.8
Africa	EURZAR represents 1 EUR per x ZAR (South African Rand)	EURZAR	32.7
Others	Other exchange rates	Other	20.8

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

Interest rate yield shocks
absolute changes (basis points)

GEO	Country	Description	3M	1Y	5Y	10Y	15Y
EU	Euro Area	Interest rate SWAP on the EUR (Euro)	-5	-7	-12	-33	-52
EU	Bulgaria	Interest rate SWAP on the BGN (Bulgarian lev)	-5	-7	-12	-33	-52
EU	Croatia	Interest rate SWAP on the HRK (Croatian Kuna)	0	-3	-21	-33	-33
EU	Czech Republic	Interest rate SWAP on the CZK (Czech Koruna)	0	1	-62	-96	-79
EU	Denmark	Interest rate SWAP on the DKK (Danish Krone)	-4	-4	-5	-40	-46
EU	Hungary	Interest rate SWAP on the HUF (Hungarian Forint)	0	-6	-37	-77	-104
EU	Poland	Interest rate SWAP on the PLN (Polish Zloty)	-5	-22	-51	-85	-99
EU	Romania	Interest rate SWAP on the RON (Romanian Leu)	-12	-22	-41	-65	-71
EU	Sweden	Interest rate SWAP on the SEK (Swedish Krona)	0	-1	-16	-42	-61
Rest of Europe	United Kingdom	Interest rate SWAP on the GBP (British Pound)	0	-2	-23	-45	-57
Rest of Europe	Norway	Interest rate SWAP on the NOK (Norwegian Krone)	-5	-11	-55	-89	-105
Rest of Europe	Switzerland	Interest rate SWAP on the CHF (Swiss Franc)	0	0	-17	-46	-63
Rest of Europe	Turkey	Interest rate SWAP on the TRY (Turkish Lira)	-8	-37	-103	-115	-115
North America	Canada	Interest rate SWAP on the CAD (Canadian Dollar)	0	0	-2	-11	-18
North America	US	Interest rate SWAP on the USD (US Dollar)	0	-1	-25	-73	-99
Australia and Pacific	Australia	Interest rate SWAP on the AUD (Australian Dollar)	0	1	-8	-30	-46
South and central America	Mexico	Interest rate SWAP on the MXN (Mexican Peso)	0	-10	-50	-100	-117
South and central America	Brasil	Interest rate SWAP on the BRL (Brazilian Real)	-19	-24	-47	-75	-75
Asia	Hong Kong	Interest rate SWAP on the HKD (Hong Kong Dollar)	-4	-3	-17	-54	-62
Asia	Japan	Interest rate SWAP on the JPY (Japanese Yen)	-1	-1	0	-10	-21
Africa	South Africa	Interest rate SWAP on the ZAR (South African Rand)	-3	-7	-26	-80	-102
Others	Other countries	Interest rate SWAP on the other currencies	-9	-11	-22	-35	-35

Sovereign credit spreads
absolute changes (basis points)

GEO	Country	Reference swap rate	3M	1Y	5Y	10Y	15Y
<i>EU</i>	Austria	EUR	30	31	40	51	53
<i>EU</i>	Belgium	EUR	79	89	114	104	102
<i>EU</i>	Bulgaria	BGN	79	89	114	104	102
<i>EU</i>	Croatia	HRK	78	117	150	156	156
<i>EU</i>	Cyprus	EUR	78	117	150	156	156
<i>EU</i>	Czech Republic	CZK	79	89	114	104	102
<i>EU</i>	Denmark	DKK	30	31	40	51	53
<i>EU</i>	Finland	EUR	30	31	40	51	53
<i>EU</i>	France	EUR	30	31	40	51	53
<i>EU</i>	Germany	EUR	30	31	40	51	53
<i>EU</i>	Greece	EUR	78	117	150	156	156
<i>EU</i>	Hungary	HUF	78	117	150	156	156
<i>EU</i>	Ireland	EUR	30	31	40	51	53
<i>EU</i>	Italy	EUR	78	117	150	156	156
<i>EU</i>	Latvia	EUR	79	89	114	104	102
<i>EU</i>	Lithuania	EUR	79	89	114	104	102
<i>EU</i>	Luxembourg	EUR	30	31	40	51	53
<i>EU</i>	Malta	EUR	78	117	150	156	156
<i>EU</i>	Netherlands	EUR	30	31	40	51	53
<i>EU</i>	Poland	PLN	78	117	150	156	156
<i>EU</i>	Portugal	EUR	78	117	150	156	156
<i>EU</i>	Romania	RON	78	117	150	156	156
<i>EU</i>	Slovakia	EUR	30	31	40	51	53
<i>EU</i>	Slovenia	EUR	79	89	114	104	102
<i>EU</i>	Spain	EUR	78	117	150	156	156
<i>EU</i>	Sweden	SEK	30	31	40	51	53
<i>North America</i>	Canada	CAD	30	36	55	55	55
<i>North America</i>	US	USD	46	59	112	111	111
<i>South and central America</i>	Brazil	BRL	78	117	150	156	156
<i>Rest of Europe</i>	United Kingdom	GBP	79	89	114	104	102
<i>Rest of Europe</i>	Norway	NOK	119	119	111	85	82
<i>Asia</i>	Japan	JPY	90	90	99	82	81
<i>Others</i>	Other countries	USD	63	79	105	103	103

Corporate credit spreads absolute changes (basis points)					
GEO	Country	Type	1 to 2 (ECAI)	3 (ECAI)	4 to 6 (ECAI)
EU	Austria	Financial	86	117	211
		Non-financial	70	86	107
	Belgium	Financial	142	173	267
		Non-financial	126	142	163
	Denmark	Financial	86	117	211
		Non-financial	70	86	107
	France	Financial	86	117	211
		Non-financial	70	86	107
	Germany	Financial	86	117	211
		Non-financial	70	86	107
	Italy	Financial	186	217	310
		Non-financial	170	185	206
	Netherlands	Financial	86	117	211
		Non-financial	70	86	107
	Spain	Financial	186	217	310
		Non-financial	170	185	206
	Sweden	Financial	86	117	211
		Non-financial	70	86	107
Rest of Europe	UK	Financial	147	178	271
		Non-financial	131	146	167
Others	Others	Financial	138	169	263
		Non-financial	122	138	159

Corporate credit spreads indexes absolute changes (basis points)			
GEO	Country	Type	Shock
EU		Itraxx Overall 5y	107
		Itraxx Crossover 5y	398
		Itraxx High vol 5y	185
		Itraxx Non financial 5y	107
		Itraxx Financial 5y	280
		Itraxx SenFinancial 5y	158
North America	US	Investment grade*	85
		High yield*	410
Asia		Investment grade **	161
		High yield**	497
Others	Others	Investment grade **	158
		High yield**	364

*CDX index

** Itraxx index

Note: for all EEA countries, please refer to EU.

Covered bonds credit spreads absolute changes (basis points)		
GEO	Type	Shock
EU	1 to 2 (ECAI)	84
	3 (ECAI)	99
	4 to 6 (ECAI)	120
North America	1 to 2 (ECAI)	77
	3 (ECAI)	93
	4 to 6 (ECAI)	114
Asia	1 to 2 (ECAI)	138
	3 (ECAI)	154
	4 to 6 (ECAI)	175
Others	1 to 2 (ECAI)	100
	3 (ECAI)	115
	4 to 6 (ECAI)	136

Note: for all EEA countries, please refer to EU.

Securitization credit spreads absolute changes (basis points)			
GEO	1 to 2 (ECAI)	3 (ECAI)	4 to 6 (ECAI)
EU	108	123	144
North America	95	110	131
Asia	150	165	186
Others	118	133	154

Note: for all EEA countries, please refer to EU.

Liquidity and modelling uncertainty relative changes (%)		
GEO	Country	Shock
<i>Global</i>	Liquidity reserve	230
<i>Global</i>	Modelling uncertainty - L2	180
<i>Global</i>	Modelling uncertainty - L3	220

FX Implied volatility shocks
relative changes (%)

GEO	Description	Risk factor name	1M	3M	6M	1Y	2Y	5Y
<i>EU</i>	<i>EURCZK ATM Implied Volatility</i>	EURCZK	170	115	90	90	63	63
<i>EU</i>	<i>EURHRK ATM Implied Volatility</i>	EURHRK	19	14	9	8	7	7
<i>EU</i>	<i>EURHUF ATM Implied Volatility</i>	EURHUF	258	154	104	81	84	78
<i>EU</i>	<i>EURPLN ATM Implied Volatility</i>	EURPLN	176	123	88	64	61	60
<i>EU</i>	<i>EURRON ATM Implied Volatility</i>	EURRON	184	107	107	82	56	52
<i>EU</i>	<i>EURRSD ATM Implied Volatility</i>	EURRSD	184	122	95	74	63	59
<i>EU</i>	<i>EURSEK ATM Implied Volatility</i>	EURSEK	151	111	83	67	75	70
<i>Rest of Europe</i>	<i>EURGBP ATM Implied Volatility</i>	EURGBP	295	217	169	117	105	95
<i>Rest of Europe</i>	<i>EURCHF ATM Implied Volatility</i>	EURCHF	251	177	139	107	98	75
<i>Rest of Europe</i>	<i>EURNOK ATM Implied Volatility</i>	EURNOK	147	101	73	60	59	55
<i>Rest of Europe</i>	<i>EURRUB ATM Implied Volatility</i>	EURRUB	377	254	220	208	222	215
<i>Rest of Europe</i>	<i>EURTRY ATM Implied Volatility</i>	EURTRY	563	341	248	175	161	96
<i>North America</i>	<i>EURCAD ATM Implied Volatility</i>	EURCAD	122	87	70	59	55	54
<i>North America</i>	<i>EURUSD ATM Implied Volatility</i>	EURUSD	113	77	60	52	52	51
<i>South and central America</i>	<i>EURARS ATM Implied Volatility</i>	EURARS	467	334	247	194	135	118
<i>South and central America</i>	<i>EURBRL ATM Implied Volatility</i>	EURBRL	467	334	247	194	135	118
<i>South and central America</i>	<i>EURMXN ATM Implied Volatility</i>	EURMXN	467	334	247	194	135	118
<i>Asia</i>	<i>EURCNY ATM Implied Volatility</i>	EURCNY	148	104	80	71	63	63
<i>Asia</i>	<i>EURHKD ATM Implied Volatility</i>	EURHKD	259	144	100	77	63	61
<i>Asia</i>	<i>EURINR ATM Implied Volatility</i>	EURINR	154	85	70	65	50	52
<i>Asia</i>	<i>EURJPY ATM Implied Volatility</i>	EURJPY	223	138	99	72	59	58
<i>Asia</i>	<i>EURKRW ATM Implied Volatility</i>	EURKRW	330	260	184	194	180	177
<i>Asia</i>	<i>EURMYR ATM Implied Volatility</i>	EURMYR	42	18	13	9	7	6
<i>Asia</i>	<i>EURSGD ATM Implied Volatility</i>	EURSGD	100	68	49	41	37	46
<i>Asia</i>	<i>EURTHB ATM Implied Volatility</i>	EURTHB	43	31	28	24	23	23
<i>Asia</i>	<i>EURTWD ATM Implied Volatility</i>	EURTWD	137	86	59	49	42	42
<i>Africa</i>	<i>EURZAR ATM Implied Volatility</i>	EURZAR	329	241	134	77	95	115
<i>Others</i>		Others	235	159	119	95	83	77

IR volatility shocks
relative changes (%)

GEO	Country	Description	1Mx1Y	1Yx1Y	5Yx5Y	10Yx10Y
EU	<i>Euro Area</i>	<i>EUR (Euro) European Swaption Black Vol ATM Libor Discount</i>	186	134	62	62
EU	<i>Czech Republic</i>	<i>CZK (Czech Koruna) European Swaption Black Vol ATM Libor Discount</i>	186	134	62	62
EU	<i>Denmark</i>	<i>DKK (Danish Krone) European Swaption Black Vol ATM Libor Discount</i>	186	134	62	62
EU	<i>Hungary</i>	<i>HUF (Hungarian Forints) European Swaption Black Vol ATM Libor Discount</i>	67	67	55	55
EU	<i>Poland</i>	<i>PLN (Polish Zloty) European Swaption Black Vol ATM Libor Discount</i>	67	67	55	55
EU	<i>Sweden</i>	<i>SEK (Swedish Krona) European Swaption Black Vol ATM Libor Discount</i>	63	58	58	58
Rest of Europe	<i>United Kingdom</i>	<i>GBP (British Pound) European Swaption Black Vol ATM Libor Discount</i>	159	157	129	11
Rest of Europe	<i>Norway</i>	<i>NOK (Norwegian Krone) European Swaption Black Vol ATM Libor Discount</i>	102	76	67	40
Rest of Europe	<i>Switzerland</i>	<i>CHF (Swiss Franc) European Swaption Black Vol ATM Libor Discount</i>	67	67	67	36
Rest of Europe	<i>Turkey</i>	<i>TRY (Turkisch Lira) European Swaption Black Vol ATM Libor Discount</i>	300	300	250	250
North America	<i>Canada</i>	<i>CAD (Canadian Dollar) European Swaption Black Vol ATM Libor Discount</i>	130	124	169	83
North America	<i>US</i>	<i>USD (US Dollar) European Swaption Black Vol ATM Libor Discount</i>	194	113	88	103
Australia and Pacific	<i>Australia</i>	<i>AUD (Australian Dollar) European Swaption Black Vol ATM Libor Discount</i>	177	156	66	72
South and central America	<i>Mexico</i>	<i>MXN (Mexican Peso) European Swaption Black Vol ATM Libor Discount</i>	350	300	250	250
South and central America	<i>Brasil</i>	<i>BRL (Brazilian Real) European Swaption Black Vol ATM Libor Discount</i>	350	300	250	250
Asia	<i>Hong Kong</i>	<i>HKD (Hong Kong Dollar) European Swaption Black Vol ATM Libor Discount</i>	200	133	140	135
Asia	<i>Japan</i>	<i>JPY (Japanese Yen) European Swaption Black Vol ATM Libor Discount</i>	229	180	163	130
Africa	<i>South Africa</i>	<i>ZAR (South African Rand) European Swaption Black Vol ATM Libor Discount</i>	186	186	244	244
Others	<i>Other countries</i>		194	113	88	103

Equity volatility shocks relative changes (%)					
GEO	Country	Index name	3M	6M	12M
<i>EU</i>	<i>EA</i>	<i>EURO STOXX 50 Volatility Index VSTOXX</i>	237	210	158
<i>Rest of Europe</i>	<i>UK</i>	<i>FTSE 100 Volatility Index</i>	237	210	158
<i>North America</i>	<i>US</i>	<i>Chicago Board Options Exchange SPX Volatility Index</i>	252	224	168
<i>Asia</i>	<i>Hong Kong</i>	<i>HSI Volatility Index</i>	204	193	170
<i>Asia</i>	<i>Japan</i>	<i>Nikkei Stock Average Volatility Index</i>	227	214	189
<i>Global</i>	<i>Emerging</i>	<i>JPMorgan Emerging Market Volatility Index (EM-VXY)</i>	350	300	200
<i>Others</i>	<i>Others</i>		251	225	174