Capital Adequacy (E) Task Force

RBC Proposal Form

[] Capital Adequacy (E) [x] Catastrophe Risk (E) [] C3 Phase II/ AG43 (I	Subgroup [] Investment RBC (E) Worki	ng Group [] Op Risk RBC (E) Subgroup		
CONTACT PERSON: TELEPHONE: EMAIL ADDRESS: ON BEHALF OF: NAME: TITLE: AFFILIATION: ADDRESS:	DATE: 11/3/2019 Eva Yeung 816-783-8407 eyeung@naic.org Catastrophe Risk (E) Subgroup Wanchin Chou Chair Connecticut Department of Insurance 153 Market St, Hartford, CT 06103	FOR NAIC USE ONLY Agenda Item #_2020-12-CR Year2020 DISPOSITION [x] ADOPTED WG 11-11-20; TF 11-19-20; Final Adoption: WG 1-27-21; TF 2/1/21 [] REJECTED [] DEFERRED TO [] REFERRED TO OTHER NAIC GROUP [x] EXPOSED 11/3/20, 1/25/21		
IDENTIFI [] Health RBC Blanks [] Fraternal RBC Blanks [] Life RBC Blanks		RUCTIONS TO BE CHANGED [] Life RBC Instructions [] Property/Casualty RBC Instructions [x] OTHERCat Event Lists		
2020 U.S. and non-U.S. C	DESCRIPTION OF CHANGE atastrophe Event Lists REASON OR JUSTIFICATION FOR and based on the sources from Swiss Re and Aon E	CHANGE **		
11/3/20 – The Cat Risk SC 11/11/20 – The Cat Risk S 11/19/20 – The Capital Ac 1/19/21 – The Cat Risk SC	Additional Staff Comments G and the PCRBC WG exposed the 2020 Cat Even G and the PCRBC WG adopted the 2020 Cat Even dequacy (E) Task Force adopted on 11/19/20. G and the PCRBC WG re-exposed the 2020 Final Comments and the PCRBC WG adopted the final 2020 Cat I	t Lists for 7 days ending 11/9/20. nt Lists. Cat Event Lists for 7 days ending 1/25/21.		

Revised 11-2013

** This section must be completed on all forms.

Type of Event	Name	Date	Location	Overall losses when occurred
Hurricane	Irene	2011		\$ 4,300,000,000
Tropical Storm	Lee	2011		\$ 315,000,000
Hurricane	Sandy	2012		\$ 50,000,000,000
Hurricane	Isaac	2012		\$ 970,000,000
Tropical Storm	Debby	2012		\$ 105,000,000
Earthquake		2014	California	25+ million
Hurricane	Patricia	2015		25+ million
Hurricane	Joaquin	2015		25+ million
Hurricane	Matthew	2016	Florida, North Carolina, South Carolina, Georgia and Virginia	\$ 2,698,400,000
Hurricane	Hermine	2016	Florida, North Carolina, South Carolina, Georgia and Virginia	\$ 245,640,000
Hurricane	Harvey	2017	Texas, Lousiana	25+ million
Hurricane	Jose	2017	East Coast of the United States	25+ million
Hurricane	Irma	2017	Eastern United States	25+ million
Hurricane	Maria	2017	Southeastern United States, Mid-Atlantic States	25+ million
Hurricane	Nate	2017	Louisiana, Mississippi, Alabama, Tennessee and Eastern United States	25+ million
Tropical Storm	Alberto	2018	Southeast, Midwest	25+ million
Hurricane	Lane	2018	Hawaii	25+ million
Tropical Storm	Gordon	2018	Southeast, Gulf coast of the United States, Arkansas and Missouri	25+ million
Hurricane	Florence	2018	Southeast, Mid-Atlantic	25+ millior
Hurricane	Michael	2018	Southeastern and East Coasts of United States	25+ millior
Hurricane	Dorian	2019	Southeast, Mid-Atlantic	500+ million
Hurricane	Barry	2019	Southeast, Midwest, Northeast	300+ million
Tropical Storm	Imelda	2019	Plains, Southeast	25+ million
Tropical Storm	Nestor	2019	Southeast	25+ million
Hurricane	Lorenzo	2019	Louisiana, Mississippi, Texas and Arkansas	25+ million
Tropical Storm	Cristobal	2020	Southeast, Plains, Midwest	150 million
Tropical Storm	Fay	2020	Southeast, Northeast	400 million
Hurricane	Hanna	2020	Texas	350 million
Hurricane	Isaias	2020	Southeast, Mid-Atlantic, Northeast	> 3 billion
Hurricane	Laura	2020	Plains, Southeast, Mid-Atlantic	> 4 billion
Hurricane	Sally	2020	Southeast (Alabama, Mississippi, Louisiana)	> 1 billion
Tropical Storm	Beta	2020	Plains, Southeast	25+ million
Tropical Storin	Detti	2020	Gulf Coast of United States, Southeast, Northeast	23 - 11111101
Hurricane	Delta	2020	(AL, GA, NC, SC, MS, LA, TX)	> 2 billion
Hurricane	Zeta	2020	Gulf coast of the United States, Southeastern United States, Mid-Atlantic	> 1.5 billion

Year	Event Type	Begin	End	Event	Country	Affected Area (Detail)	Numeri Re NatCATService Insured losses (in original values, US\$m) Criteria: insured losses equal/greater US\$ 25m. Tries to reflect non-US losses	Swiss Re Sigma: Insured Loss Est. US\$m (mid point shown if range given) Mostly reflect total US and nonUS losses combined.	
2011	Tropical Cyclone		22/09/2011	Typhoon Roke (Onyok), floods	Country	Anected Area (Betail)	1200	1210	
2011	Tropical Cyclone	22/08/2011	02/09/2011	Hurricane Irene		Caribbean Islands and Eastern Canada	300	5300	
2011	Earthquake	13/06/2011	13/06/2011	Earthquake	New Zealand	South Island, Canterbury, Christchurch, Lyttelton	800	2000	
2011	Earthquake	11/03/2011	11/03/2011	Earthquake	Japan	Honshu, Aomori, Tohoku; Miyagi, Sendai; Fukushima, Mito; Ibaraki; Tochigi, Utsunomiya; Iwate, Morioka; Yamagata. Chiba: Tokyo	35000	35000	
2011	Tropical Cyclone	09/02/2011	09/03/2011	Tropical Storm Talas		Turnagata, Oriiba, Tokyo	N/A	470	
2011	Earthquake	22/02/2011	22/02/2011	Earthquake	New Zealand	South Island, Canterbury, Christchurch, Lyttelton	13000	12000	
2011	Tropical Cyclone	02/02/2011	07/02/2011	Cyclone Yasi		Queensland, Tully, Townsville, Mission Beach, Cardwell, Giru, Ingham, Innisfail, Cassowary Coast Shire, Cairns, Bedarra and Dunk islands	1430	1360	
2012	Earthquake	29/05/2012	29/05/2012	Earthquake	Italy	Emilia-Romagna, San Felice del Panaro, Cavezzo, Rovereto di Novi, Carpi, Concordia, Bologna, Mailand, Aosta Vallev, Venice, Mirandola	1600	N/A	
2013	Tropical Cyclone	08/11/2013	12/11/2013	Typhoon Haiyan		Phillippines, Vietnam, China	700	N/A	
2014	Earthquake	07/07/2014		Earthquake	Mexico, Guatemala		N/A	N/A	25+milion
2014	Earthquake	04/01/14		Earthquake	Chile		N/A	N/A	100+milion
2014	Earthquake	12/02/2014		Earthquake	China		N/A	N/A	350+milion
2014	Earthquake	05/04/2014		Earthquake	China		N/A	N/A	80+milion
2014	Earthquake	05/05/2014		Earthquake	Thailand		N/A	N/A	62+milion
2014	Earthquake	05/24/14		Earthquake	China		N/A	N/A	60+milion
2014	Tropical Storm	06/14/14	06/16/14	TS Hagibis	China		N/A	N/A	131+milion
2014	Super Typhoon	07/08/14	07/11/14	STY Neoguri	Japan		N/A	N/A	100+milion
2014	Super Typhoon	07/15/14	07/20/14	STY Rammasun		Philippines, China, Vietnam	N/A	N/A	570+milion
2014	Typhoon	07/22/14	07/24/14	TY Matmo		Taiwan, China, Philippines	N/A	N/A	570+milion
2014	Cyclone	01/10/14	01/12/14	CY lan	Tonga		N/A	N/A	48+milion
2014	Cyclone	04/10/14	04/14/14	CY Ita	Australia		N/A	N/A	1+billion
2015	Hurricane	08/16/92	08/28/92	Hurrican Andrew	Bahamas	Bahamas			> 25 million
2015	Hurricane	10/20/15	10/24/15	Hurricane Patricia		Central America, Mexico	N/A	N/A	> 25 million
2015	Typhoon	06/26/15	07/13/15	Typhoon Chan-hom (Falcon)		Guam, Northern Mariana Islands, Philippines, Japan, Taiwan, Chian, Korea, Russian Far East	N/A	N/A	> 25 million
2015	Severe Tropical Storm	07/01/15	07/10/15	Severe Tropical Storm Linfa (Egay)		Philippines, Taiwan, China	N/A	N/A	> 25 million
2015	Typhoon	07/02/15	07/18/15	Typhoon Nangka		Marshall Islands, Mariana Islands and Japan	N/A	N/A	> 25 million
2015	Typhoon	07/29/15	08/12/15	Typhoon Soudelor (Hanna)		Mariana Islands, Japan, Philippines, Taiwan, Eastern China and South Korea	N/A	N/A	> 25 million
2015	Typhoon	08/13/15	08/30/15	Typhoon Goni (Ineng)		Mariana Islands, Japan, Philippines, Taiwan, China, Russia and Korea	N/A	N/A	> 25 million
2015	Severe Tropical Storm	09/06/15	09/11/15	Severe Tropical Storm Etau		Japan, Russian Far East	N/A	N/A	> 25 million

2015	Typhoon	09/19/15	09/30/15	Typhoon Dujuan (Jenny)		Ryukyu Islands, Taiwan, East China	N/A	N/A	> 25 million
2015	Typhoon	09/30/15	10/05/15	Typhoon Mujigae (Kabayan)		Philippines, Vietnam and China	N/A	N/A	> 25 million
2015	Typhoon	10/12/15	10/21/15	Typhoon Koppu (Lando)		Northern Mariana Islands, Philippines, Taiwan, Ryukyu Islands	N/A	N/A	> 25 million
2015	Typhoon	12/03/15	12/08/15	Storm Desmond		Ireland, Isle of Man, United Kingdom, Iceland, Norway and Sweden	N/A	N/A	> 25 million
2015	Hurricane	09/28/15	10/15/15	Hurricane Joaquin		Caribbean Islands, Portugal	N/A	N/A	> 25 million
2015	Earthquake	04/27/15	10/10/10	Earthquake	Nepal	Caribboar Iolariac, Fortaga	N/A	N/A	> 25 million
2015	Earthquake	09/22/15		Earthquake	Chile		N/A	N/A	> 25 million
2016	Hurricane	08/28/16	09/06/16	Hurricane Hermine		Dominican Republic, Cuba, The Bahamas	N/A	N/A	> 25 million
2016	Tropical Cyclone	02/16/16	02/22/16	TC Winston		South Pacific Islands	N/A	N/A	> 25 million
2016	Earthquake	02/06/16		Earthquake	Taiwan	Asia	N/A	N/A	> 25 million
2016	Earthquake	01/03/16		Kaohsiung EQ	India, Bangladesh, Myanmar	Asia	N/A	N/A	> 25 million
2016	Earthquake	02/14/16		Christchurch EQ	New Zealand	Oceania	N/A	N/A	> 25 million
2016	Earthquake	04/14/16	04/16/16	Kumamoto EQs	Japan	Asia	N/A	N/A	> 25 million
2016	Earthquake	04/16/16		Ecuador EQ	Ecuador	South America	N/A	N/A	> 25 million
2016	Tropical Cyclone	05/14/16	05/23/16	CY Roanu	Sri Lanka, india, Bangladesh, China	Asia	N/A	N/A	> 25 million
2016	Earthquake	08/24/16		Italy EQ	Italy	Europe	N/A	N/A	> 25 million
2016	Tropical Cyclone	09/14/16	09/16/16	STY Meranti	China, Taiwan, Philippines	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	07/08/16	07/12/16	STY Nepartak	China, Taiwan	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone		09/29/16	TY Megi	Taiwan, China	Asia	N/A	N/A	> 25 million
2016	Earthquake	09/10/16		Kagera EQ	Tanzania, Uganda	Africa	N/A	N/A	> 25 million
2016	Tropical Cyclone	08/29/16	09/01/16	TY Lionrock	China, Japan, South Korea	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	09/19/16	09/22/16	TY Malakas	Japan, China	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	08/18/16	08/20/16	TS Dianmu	China, Vietnam	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	07/31/16	08/03/16	TY Nidia	China, Phillippines Vietnam	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	08/02/16	08/10/16	HU Earl	Belize, Mexico, Carribbean Islands	Caribbean Islands, Mexico and Central America	N/A	N/A	> 25 million
2016	Tropical Cyclone	08/22/16	08/23/16	TS Mindulle	Japan	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	09/06/16	09/08/16	HU Newton	Mexico	North America (non-U.S.)	N/A	N/A	> 25 million
2016	Tropical Cyclone	10/04/16	10/07/16	STY Chaba	Japan, Korea	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	10/16/16	10/22/16	STY Haima	Phillipines, China	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone		10/20/16	TY Sarika	Phillipines, China, Vietanm	Asia	N/A	N/A	> 25 million
2016	Earthquake	10/26/16	1	Central Italy EQ	Italy	Europe	N/A	N/A	> 25 million
2016	Earthquake	10/27/16	}	Central Italy EQ	Italy	Europe	N/A	N/A	> 25 million
2016	Earthquake	10/21/16	}	Tottori	Japan	Asia	N/A	N/A	> 25 million
2016	Hurricane	09/28/16	10/10/16	Hurricane Matthew		Carribbean Islands and Eastern Canada	N/A	N/A	> 25 million
2016	Hurricane	08/28/16	09/06/16	Hurricane Hermine	n .	Dominican Republic, Cuba, The Bahamas	N/A	N/A	> 25 million
2017	Earthquake	01/18/17	 	Earthquake	Italy	Europe	N/A	N/A	> 25 million
2017	Earthquake	01/28/17	 	Earthquake	China	Asia	N/A	N/A	> 25 million
2017	Earthquake	02/10/17	 	Earthquake	Philippines	Asia	N/A	N/A	> 25 million
2017 2017	Earthquake Cyclone	03/27/17	04/05/17	Earthquake CY Debbie	China Australia	Asia Queensland, New South Wales, New	N/A N/A	N/A N/A	> 25 million > 25 million
	1				1	Zealand			

2017	Earthquake	05/11/17		Earthquake	China	Asia	N/A	N/A	> 25 million
2017	Typhoon	07/29/17	07/31/17	TY Nesat & TS Haitang	China, Taiwan, Philippines	Asia	N/A	N/A	> 25 million
2017	Typhoon	08/07/17	08/09/17	Typhoon Noru	Japan	Asia	N/A	N/A	> 25 million
2017	Earthquake	08/08/17		Earthquake	China	Asia	N/A	N/A	> 25 million
2017	Typhoon	08/23/17	08/24/17	TY Hato	China	Macau, Hong Kong	N/A	N/A	> 25 million
2017	Typhoon	08/25/17	08/28/17	TY Pakhar	China	Asia	N/A	N/A	> 25 million
2017	Hurricane	08/25/17	09/02/17	Hurricane Harvey		Caribbean Islands and Central America	N/A	N/A	> 25 million
2017	Hurricane	08/30/17	09/16/17	Hurricane Irma		Caribbean Islands and Cape Verde	N/A	N/A	> 25 million
2017	Hurricane	09/05/17	09/26/17	Hurricane Jose		Caribbean Islands and Eastern Canada	N/A	N/A	> 25 million
2017	Hurricane	09/16/17	10/03/17	Hurricane Maria		Caribbean Islands, UK, Francs and Spain	N/A	N/A	> 25 million
2017	Earthquake	09/07/17		Earthquake		Mexico, Guatemala	N/A	N/A	> 25 million
2017	Earthquake	09/19/17		Earthquake	Mexico	Mexico City	>200	N/A	> 25 million
2017	Hurricane	10/04/17		Hurricane Nate		Central America, Cayman Islands, Cuba Yucatan Peninsula	N/A	N/A	> 25 million
2018	Earthquake	02/06/18		Earthquake	Taiwan				> 25 million
2018	Earthquake	02/16/18	1	Earthquake	Mexico				> 25 million
2018	Cyclone	02/09/18	02/20/18	CY Gita	Tonga, Fiji, Samoa, New Zealand				> 25 million
2018	Earthquake	02/26/18		Earthquake	Papua New Guinea				> 25 million
2018	Earthquake	03/05/18		Earthquake	Papua New Guinea				> 25 million
2018	Cyclone	03/17/18		CY Marcus					> 25 million
2018	Tropical Storm	05/23/18	05/27/18	Tropical Storm Mekunu	Yamen, Oman , Saudi Arabia				> 25 million
2018	Tropical Storm	06/02/18	06/07/18	Tropical Storm Ewiniar	Vietnam, China, Taiwan, Philippines and Ryukyu Islands	Guangdong Province, Jiangxi, Fujian, Zhejiang Provinces, and Hainan Island.			> 25 million
2018	Earthquake	06/18/18		Earthquake	Japan				> 25 million
2018	Super Typhoon	07/10/18	07/12/18	STY Maria	China, Taiwan, Guam and Japan	Fujian province, Yantze River Basin, Japan's Rvukvu Islands			> 25 million
2018	Tropical Storm	07/17/18	07/24/18	TS Sonh-Tinh	Vietnam, China, Loas	Japan, Russian Far East			> 25 million
2018	Tropical Storm	07/22/18	07/25/15	TS Ampil	China	Jiangsu, Zhejiang, Shandong, and Hebei			> 25 million
2018	Typhoon	07/27/18	08/03/18	TY Jongdari	Japan, China				> 25 million
2018	Earthquake	08/05/15	08/09/18	Earthquake	Indonesia	_			> 25 million
2018	Tropical Storm	08/09/18	08/15/18	TS Yagi	Philippines, China	Zhejiang, Anhui, Jiangsu and Shandong Provinces.			> 25 million
2018	Tropical Storm	08/13/18	08/19/18	TS Bebinca	China	Hong Kong, Guangdong and Hainar			> 25 million
2018	Typhoon	08/16/18	08/18/18	TY Rumbia	China	Shanghai, Jiangsu, Zhehiang, Anhui, Shandong and Henar			> 25 million
2018	Typhoon	08/23/18	08/25/18	TY Soulik	Japan, South Korea, China and Russia	Haenam County, South Jeolla Province			> 25 million
2018	Typhoon	09/04/18	09/05/18	RY Jebi	Japan, Mariana Islands, Taiwan, Japan, Russian Far East and Artic				> 25 million

2018	Earthquake	09/06/18		Earthquake	Japan	Hokkaido		> 25 million
2018	Super Typhoon	09/15/18	0918/18	STY Mangkhut	N. Mariana Islands, Philippines, China and Hong Kong			> 25 million
2018	Hurricane	Leslie	09/23/18	Hurricane Leslie	Azores, Bermuda, Europe	Azores, Bermuda, Madeira, Iberian Peninsula, France		> 25 million
2018	Hurricane	10/07/18	10/16/18	Hurricane Michael	Central American, Yucatan Peninsula, Cayman Islands, Cuba, Atlantic, Canad			> 25 million
2019	Cyclone	05/03/19	05/05/19	Cyclone Fani	India, Bangladesh			>500 million
2019	Earthquake	06/17/19		Earthquake	China			> 25 million
2019	Tropical Storm	08/01/19	08/08/19	Tropical Storm Wipha	China, Vietnam			> 25 million
2019	Typhoon	08/09/19	08/11/19	Typhoon Lekima	China			> 855 million
2019	Typhoon	08/15/19	08/16/19	Typhoon Krosa	Japan			>25 million
2019	Hurricane	08/31/19	09/07/19	Hurricane Dorian	Caribbean, Bahamas, Canada			>1 billion
2019	Typhoon	09/05/19	09/08/19	Typhoon Lingling	Japan, China, Korea			>5.78 billion
2019	Typhoon	09/08/19	09/09/19	Typhoon Faxai	Japan			> 7 billion
2019	Hurricane	09/19/19	09/22/19	Hurricane Humberto	Bermuda			>25+ million
2019	Hurricane	09/17/19	09/26/19	Hurricane Lorenzo	Portugal			>25+ million
2019	Earthquake	11/26/19		Earthquake	Albania			>25+ million
2019	Cyclone	11/08/19	11/11/19	Cyclone Matmo (Bulbul)	India, Bangladesh			>25+ million
2019	Typhoon	10/01/19	10/02/19	Typhoon Hagibis	Japan			> 7 billion
2019	Earthquake	12/18/19		Earthquake	Philippines			>25+ million
2020	Earthquake	03/22/20		Earthquake	Croatia			>25+ million
		04/01/20	04/11/20	Cyclone Harold	Solomon Islands, Canuatu, Fiji, Tonga			> 25+ million
2020	Tropical Storm	05/31/20		Tropical Storm Amanda	El Salvador, Guatemala, Honduras			> 25+ million
2020	Tropical Storm	06/01/20	06/05/20	Tropical Storm Cristobal	Mexico, Guatemala, El Salvador			150 million
2020	Hurricane	07/25/20	07/27/20	Hurricane Hanna	Mexico			350 million
2020	Hurricane	07/28/20	08/01/20	Hurricane Isaias	Caribbean, Canada			> 3 billion
2020	Hurricane	08/22/20	08/25/20	Hurricane Laura	Caribbean			> 4 billion
2020	Typhoon	05/15/20	05/22/20	Typhoon Amphan	India, Bangladesh, Sri Lanka			15 billion
2020	Tropical Storm	06/03/20	06/04/20	Tropical Storm Nisarga	India			> 25+ million
2020	Typhoon	08/03/20	08/04/20	Typhoon Hagupit	China, Taiwan			> 100+ million
2020	Hurricane	10/05/20	10/12/20	Hurricane Delta	Jamaica, Nicaragua, Cayman Island, Yucatan Peninsula			> 2 billion
2020	Hurricane	10/24/20	10/30/20	Hurricane Zeta	Cayman Islands, Jamaica, Central America, Yucatan Peninsula, Ireland, United Kingdom			> 1.5 billion
2020	Cyclone	04/01/20	04/11/20	Cyclone Harold	Solomon Islands, Canuatu, Fiji, Tonga			> 25+ million
2020	Hurricane	10/31/20	11/14/20	Hurricane Eta	Colombia, Jamaica, Central America, Cayman Islands, Cuba, The Bahamas			> 7.9 billion

2020	Hurricane	11/14/20	11/19/20	Hurricane Iota	ABC Islands, Colombia, Jamaica, Central America				> 1.4 billion
2020	Typhoon	11/22/20	11/23/20	Typhoon Goni	Philippines, Vietnam, Cambodia, Laos				> 400+ million
2020	Typhoon	11/08/20	11/15/20	Typhoon Vamco	Philippines, Vietnam, Laos, Thailand				> 400+ million
Source: 1	Source: Munich Re's NAT CAT Service Swiss Re Sigma and Ann Renfield								