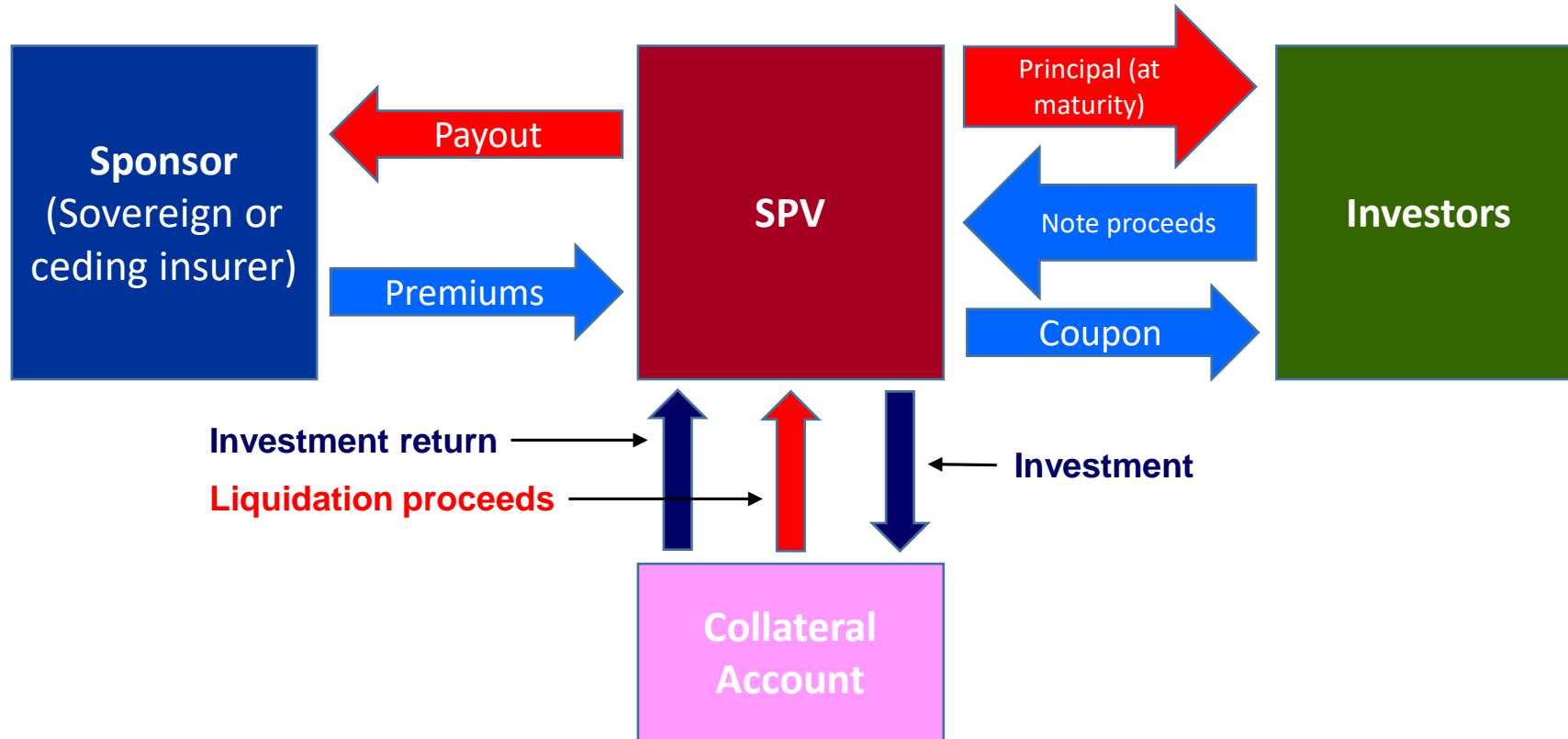


Catalyzing the APEC Market for Catastrophe Bonds

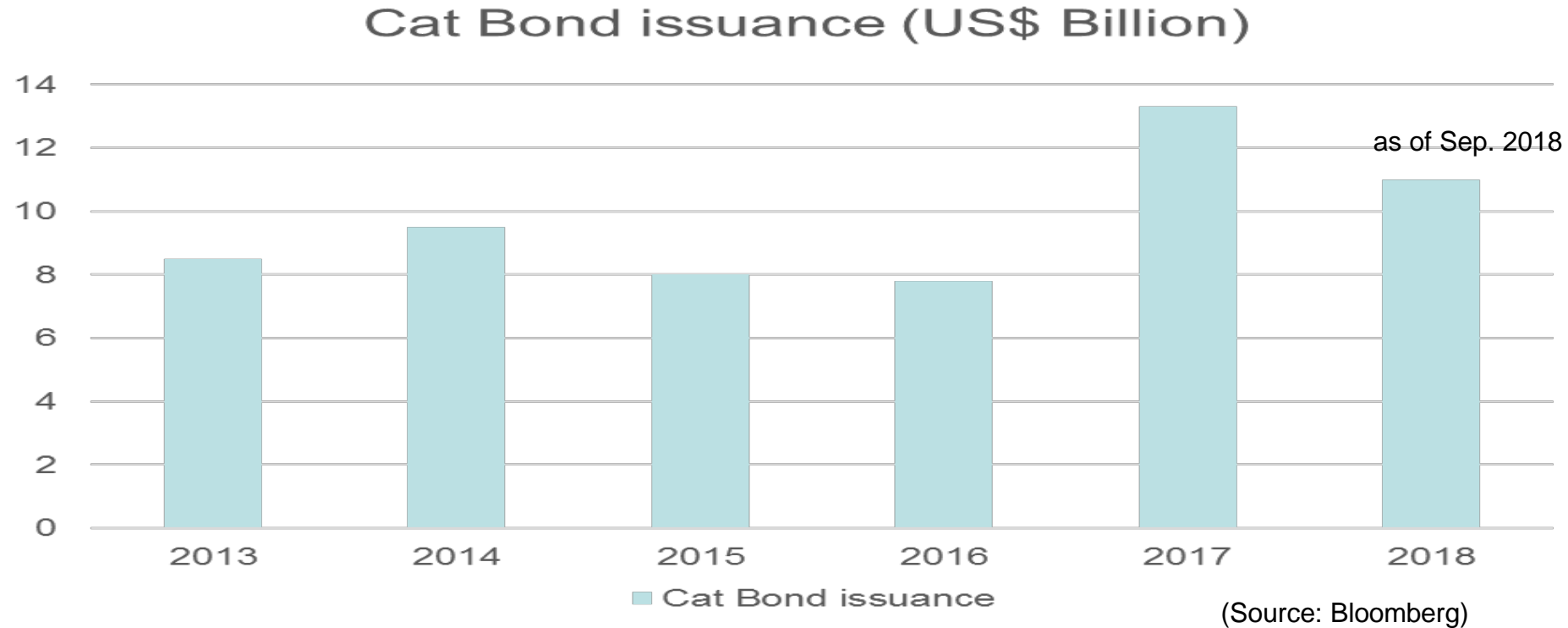
Cat bonds: A way for capital market investors to contribute to DRFI

Structure of a cat bond transaction



Cat bonds are very attractive to investors

“The Catastrophe Bond Business Is Booming” (Bloomberg, 11 Sep. 2018)



- Cat bonds have not posted a negative annual return since the Swiss Re Cat Bond Total Return Index began in 2003. (Bloomberg)
- Cat bonds: a niche asset class representing a small fraction of disaster capital, which stands at approx. \$350B.

The Pacific Alliance Cat Bond

The World Bank issued bonds that collectively provide US\$ 1.36 billion in earthquake protection to Chile, Colombia, Mexico and Peru.

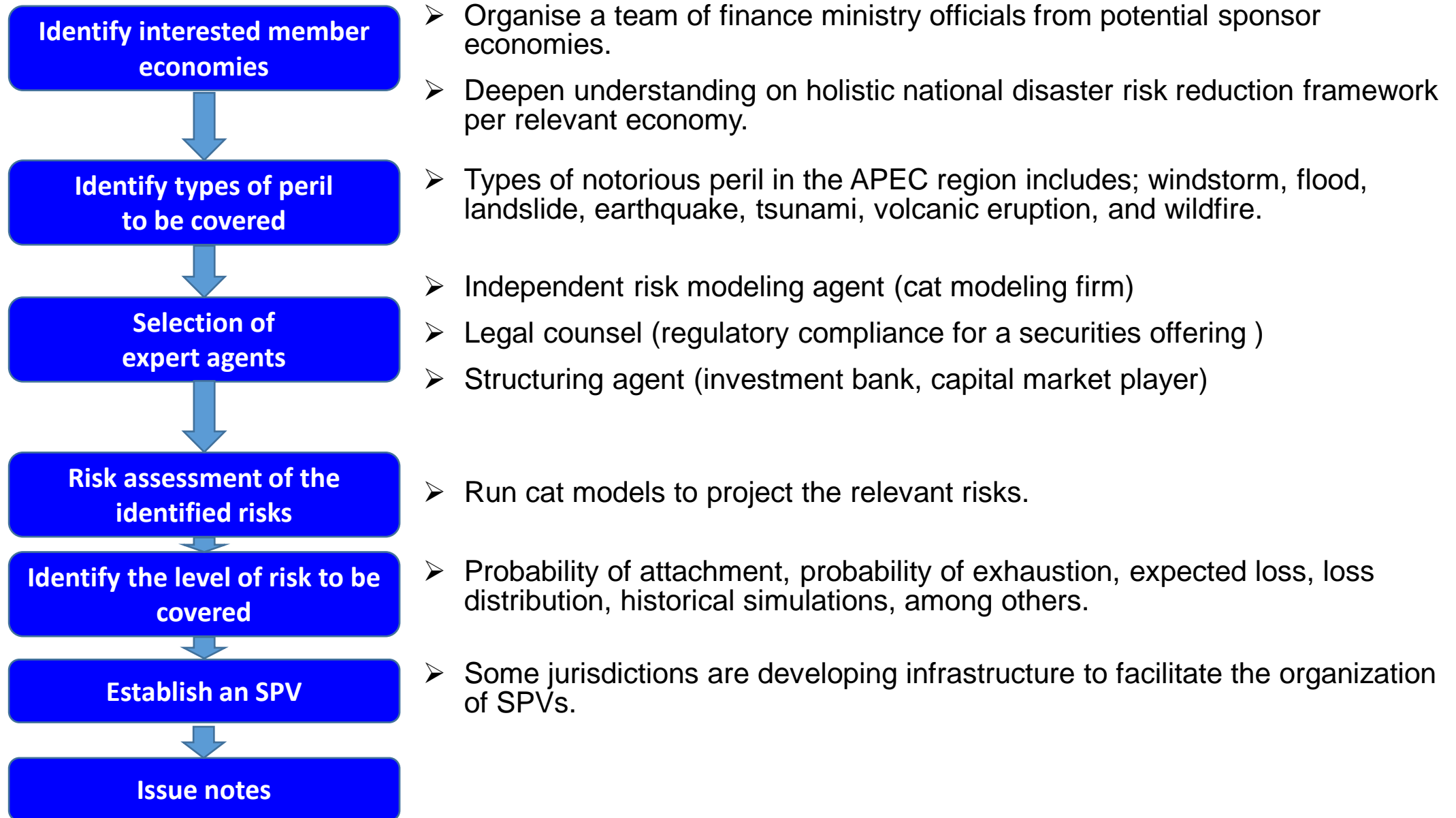
Jointly led by Swiss Re, Aon and Citi, and modeled by AIR Worldwide, the Pacific Alliance Cat Bonds are notable for;

- the largest sovereign risk insurance transaction ever,
- the second largest issuance of in the history of the cat bond market,
- the first time for Chile, Colombia and Peru to access the capital markets to obtain insurance for natural disasters,
- received strong demand from the market with over 45 investors from around the world, and almost US\$ 2.5 billion of investor orders.

	Chile	Colombia	Mexico A	Mexico B	Peru
Issuer	International Bank for Reconstruction and Development (IBRD)				
Issue Size	\$ 500M	\$ 400M	\$ 160M	\$ 100M	\$ 200M
Settlement	7 Feb. 2018				
Scheduled Maturity Date	15 Feb. 2021	15 Feb. 2021	14 Feb. 2020	14 Feb. 2020	15 Feb. 2021
Bond Coupon	3-month USD LIBOR + Funding Margin(-0.20 per cent per annum) + Risk Margin (per annum)				
Risk Margin (per annum)	+2.50 per cent	+3.00 per cent	+2.50 per cent	+8.25 per cent	+6.00 per cent
Covered Peril	Earthquake Event				

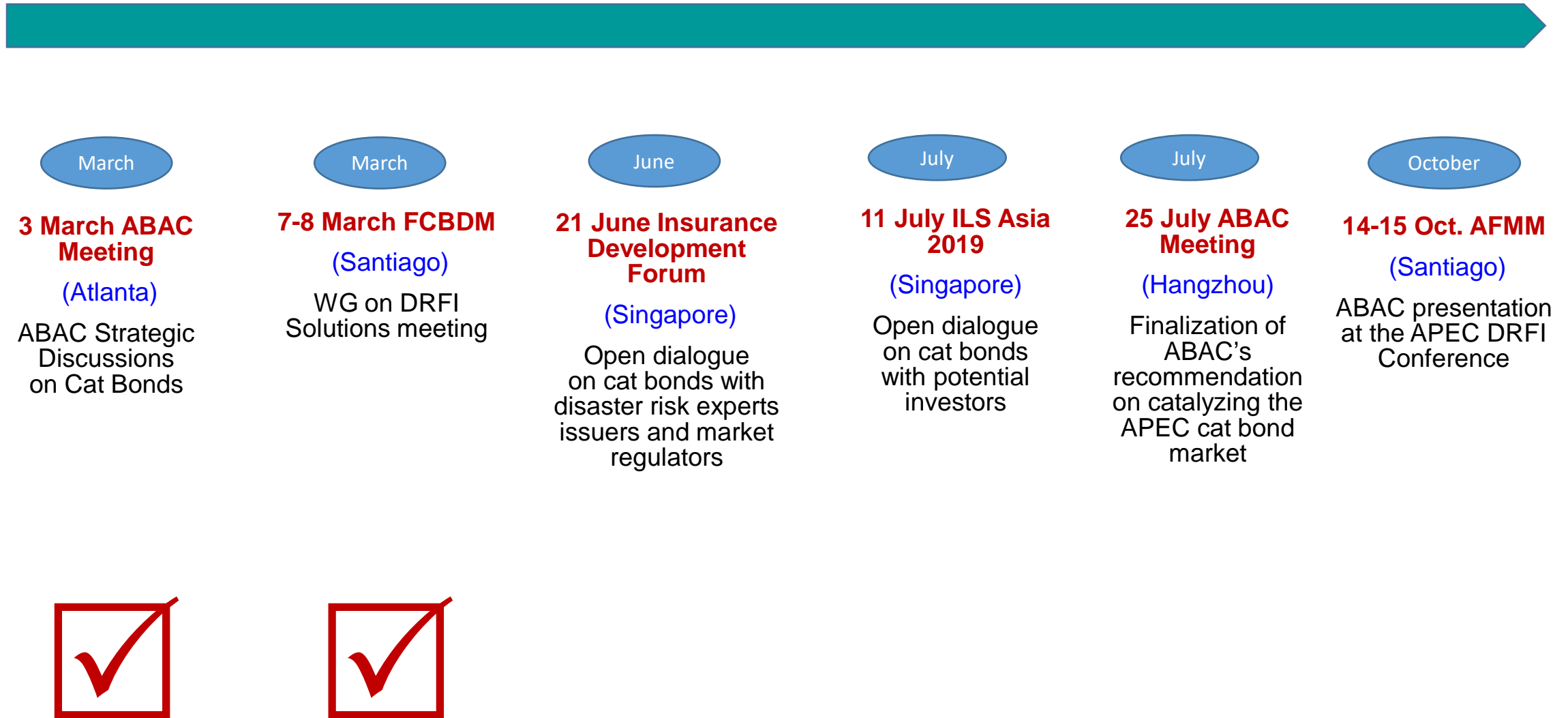
(Source: The World Bank's press release 7 Feb. 2018)

Example of steps toward a regional cat bond



(Compiled from various sources, including RMS, AIR Worldwide)

ABAC's work on catalyzing the APEC cat bond market



Proposed themes of June 21 and July 11 sessions

June 21 IDF session

- Focus: Catbond role in DRFI strategy in Asia
- Target outcome: to confirm the need and readiness of Asia to start tapping the catbond market
- Moderator: **JC Parrenas**
- Presentation on DRFI in Asia and role of Catbond (including how it could relate to SEADRIF): **Masaaki Nagamura**
- Presentation on prospects for Asian cat bond issuance (including Singapore's plan to promote catbond issuance in its market): **MAS**
- Presentation on the Philippine case - rationale for issuing catbond and its role in DRFI strategy: **Philippine Official**
- Presentation on the use of catbonds in the US from hurricanes: **Morgan Stanley**
- Presentation on the case of the Pacific Alliance cat bond as a model for Asia: **Citi**

July 11 ILS session

- Focus: Investors' views
- Target outcome: to confirm the interest of major investors in investing in Asian catbonds
- Moderator: To be provided by **Artemis**
- Presentation on the World Bank's perspectives on Asian catbonds: **Michael Bennett, World Bank**
- Presentation on ABAC/APEC's work on catbonds: **JC Parrenas**
- Comments on how they would view Asian catbonds: **3-4 asset management company representatives**