

Predicting Paris: Forecasting the Outcomes of the UN Climate Negotiations in Paris 2015

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Mission

- Query
 - Can we forecast the outcomes of the UNFCCC COP 21 at Paris?
- Three Approaches
 - Expert Survey (ES) of the expected outcomes
 - Exchange Model (EM)
 - Predictioneer's Game (PG)
- Common Scales (see handouts)

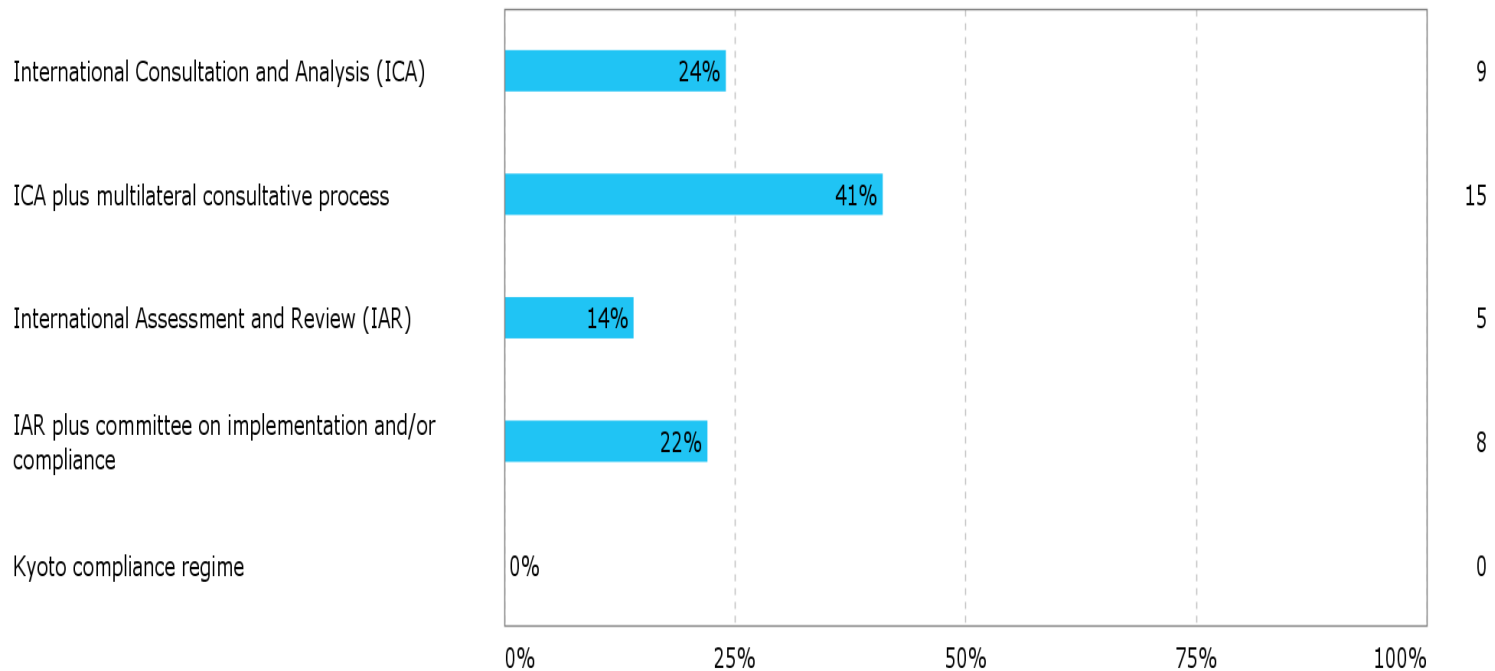
Overview of Results

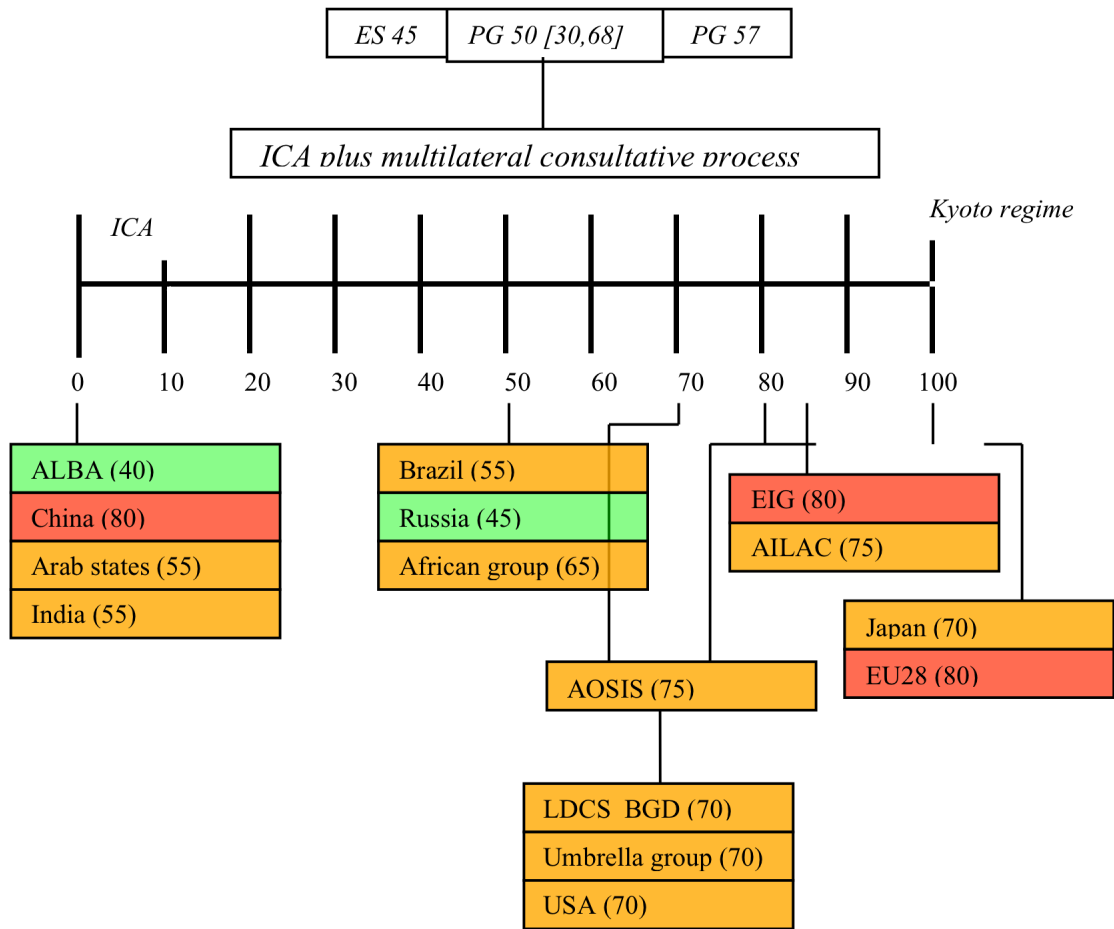
Issue	Expert Survey	Exchange Model	Predictioneer's Game	Scale Points
Differentiation	39/50/ 50	43	58 [50,66]	50: CBDR in light of national circumstances
Mitigation - MRV & Compliance	43/45/ 45	57	50 [30,68]	50: ICA 65: IAR
Mitigation – Legal Form	60/70/ 70	51	53 [44,63]	50: binding int. + non-binding country-specific
Adaptation – Legal Framework	44/40/ 40	79	60 [48,73]	40: collective non-binding 80: non-binding country-specific commitments
Adaptation – Institutions	52/60/ 60	67	67 [54,80]	60: strengthen present institutions
Climate Finance – Volume	17/20/ 20	77	55 [35, 75]	20: start \$100 b+ p.a. 60: \$ 300b p.a.

Overview of Results

Issue	Expert Survey	Exchange Model	Predictioneer's Game	Scale Points
Climate Finance – Who	33/20/20	44	27 [12, 43]	20: DC + invite 60: DC + some others required
Adaptation Reserved Finance	30/50/50	62	66 [48, 83]	50: ca. 50% earmarked for adaptation
Loss & Damage	29/30/30	14	45 [37, 53]	30: separate chapter w/ little substance
Ambition Level – Mitigation Mechanism	43/40/40	35	35 [25, 45]	30: no backsliding
Mitigation - 2050	21/20/20	72	n.a.	30: qualitative goal w/ roadmap
Mitigation - 2100	33/0/20	92	n.a.	80: zero net emissions
Ex Ante Assessment	42/20/20	21	35 [25, 45]	20: EEA of aggregate ambition

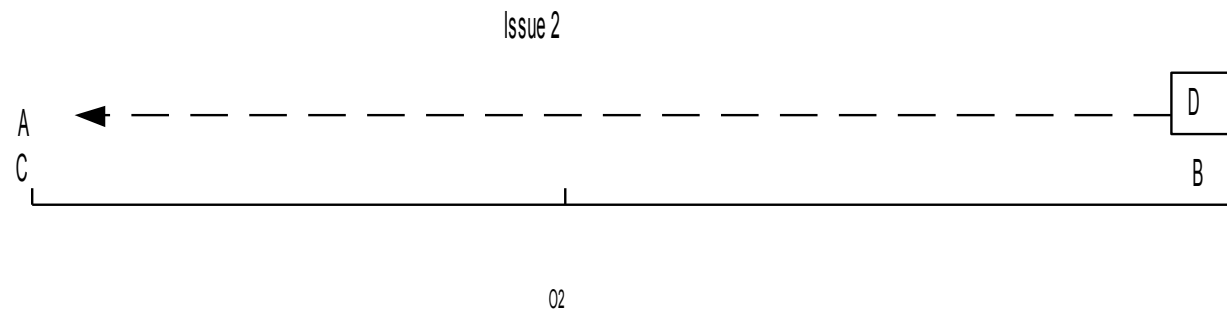
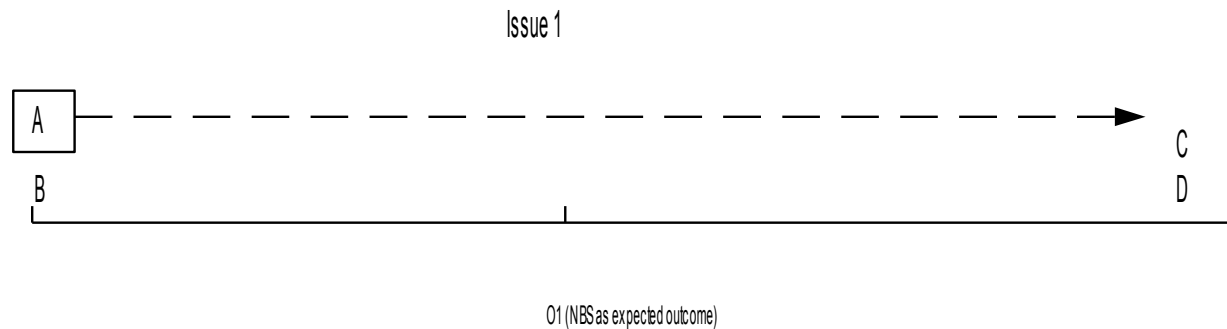
Regarding mitigation, what will be the minimum MRV and compliance provisions any country faces?

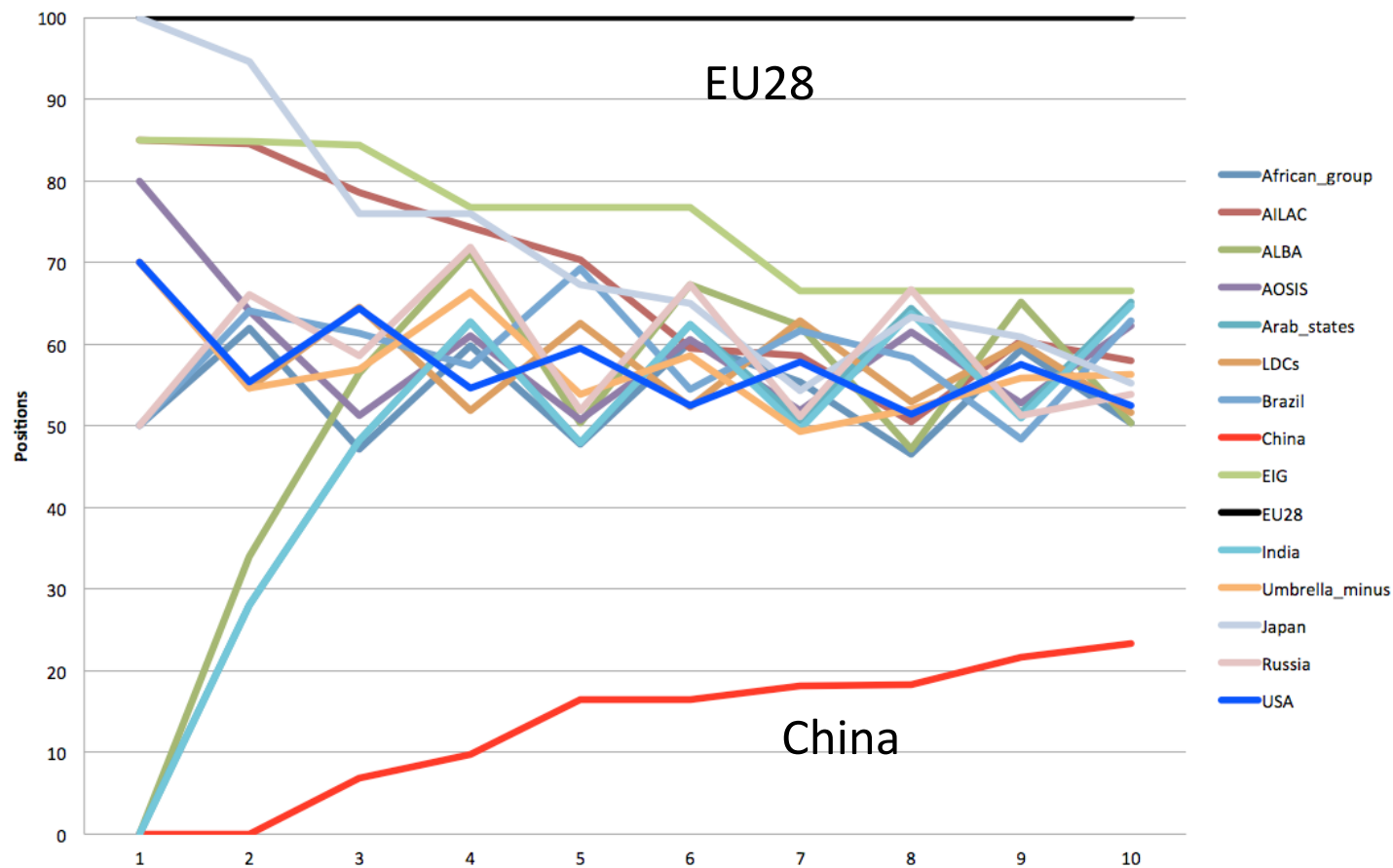




Issue 2: Mitigation MRV and compliance

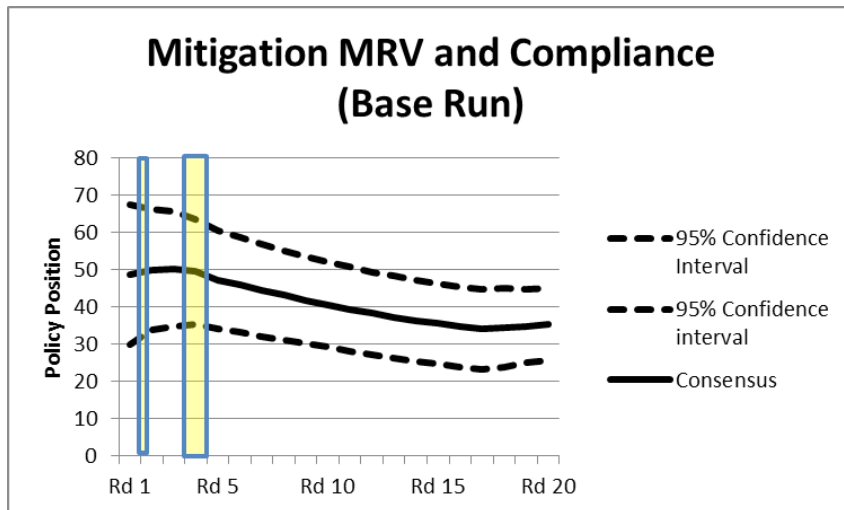
Identifying exchange opportunities: exchange partners must be on opposite sides of the expected outcomes





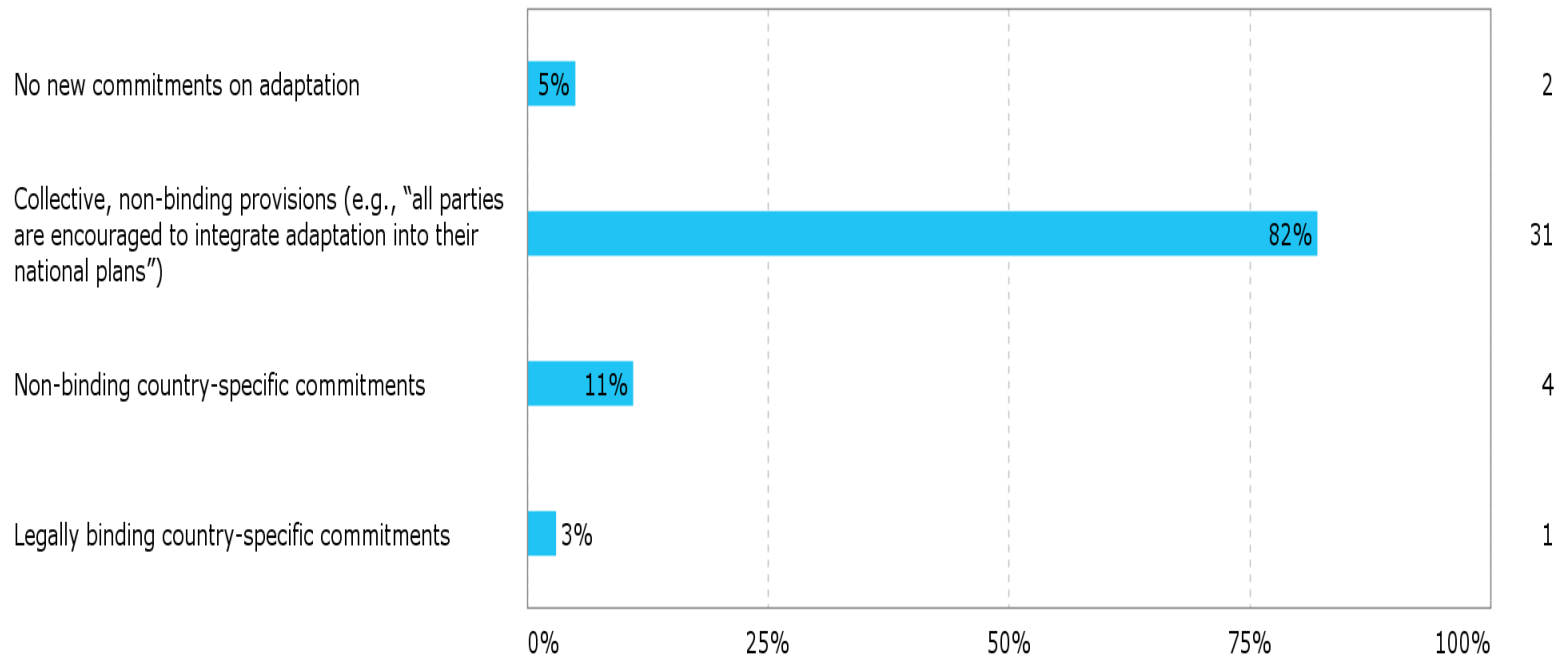
The Exchange Model's Forecasts on the Development of Stakeholders' Positions on the Issue of Mitigation MRV

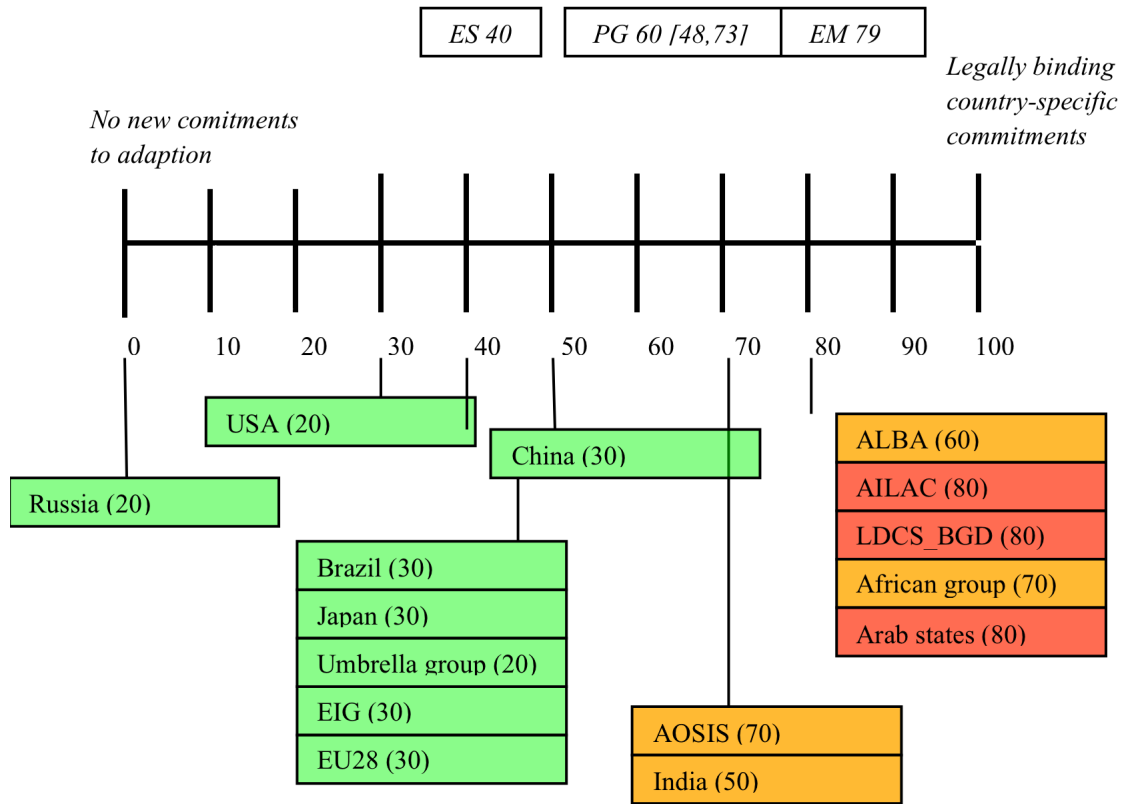
Mitigation - MRV & Compliance



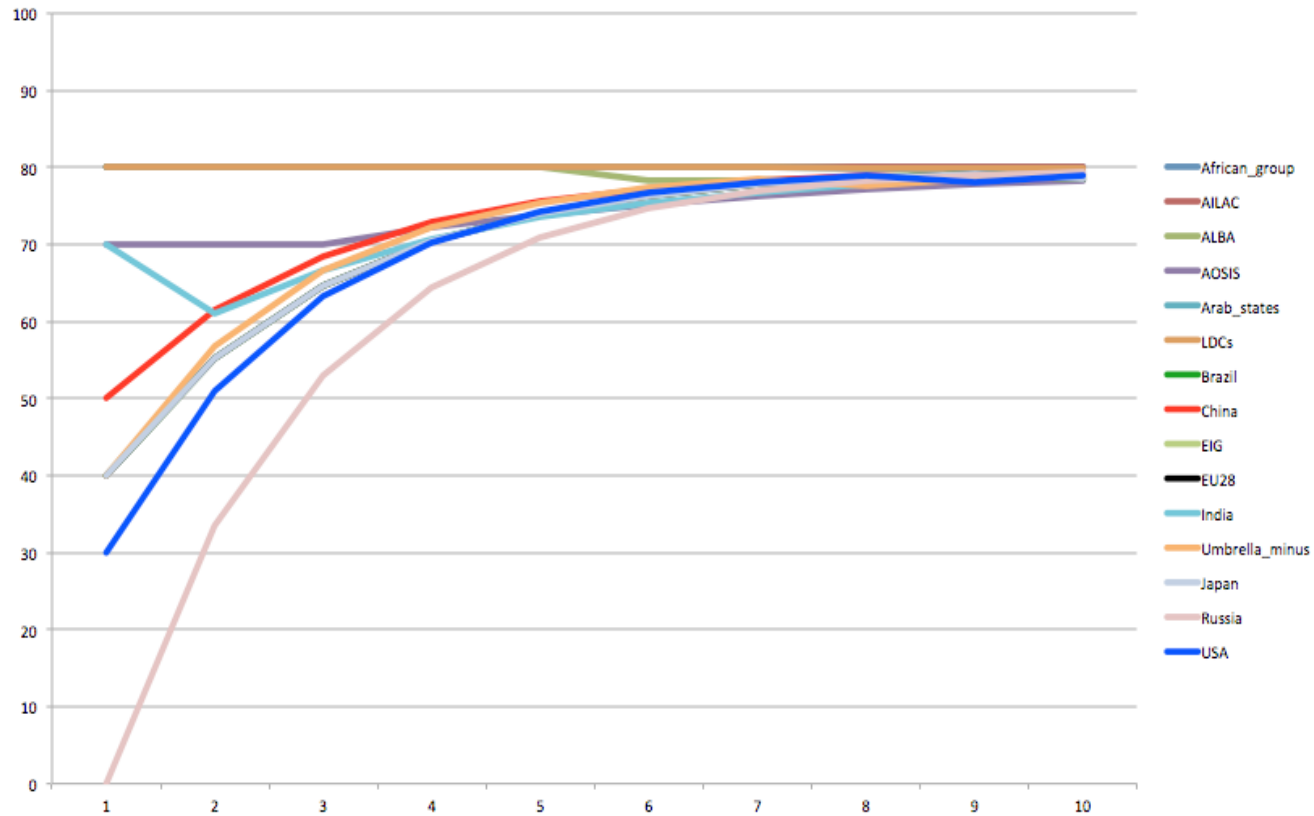
- Game ends in R 1 or shortly thereafter with a score around 50 [30, 68] (i.e., an International Consultation and Analysis combined with a multilateral consultative process).
- An International Assessment and Review with a committee on implementation and/or compliance lies outside the 95% confidence interval.
- If the equilibrium is reached in R 3, then many countries favoring adoption of the Kyoto compliance regime make considerable concessions.

Regarding adaptation, to what extent will targets be country-specific and internationally legally binding?



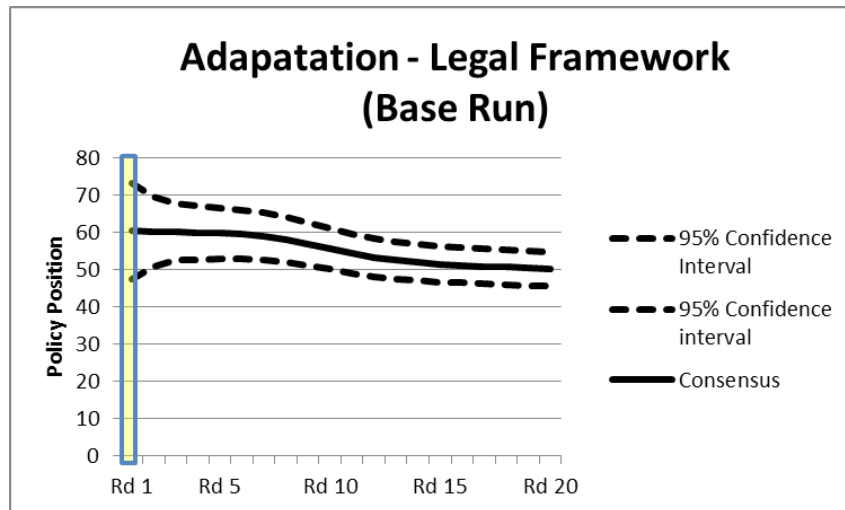


Issue 4: Adaption legal framework



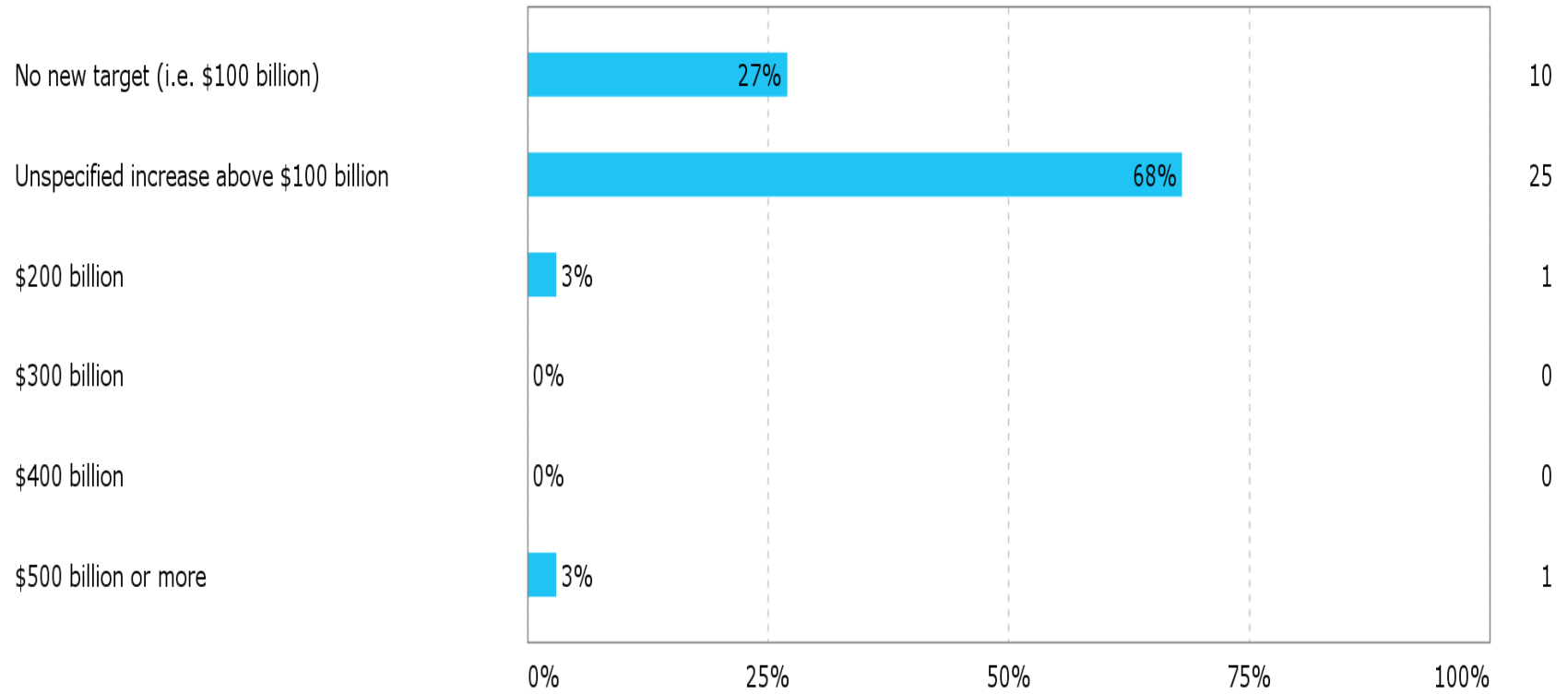
The Exchange Model's Forecasts on the Development of Stakeholders' Positions on the Issue of Adaptation Legal Form

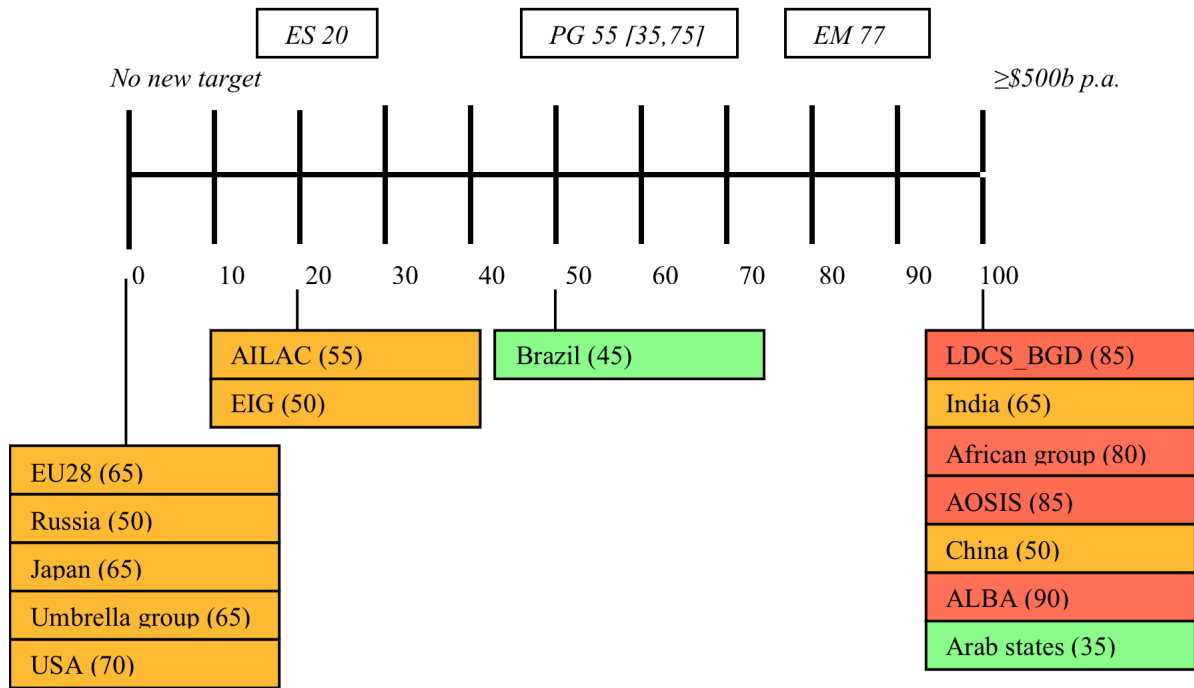
Adaptation – Legal Framework



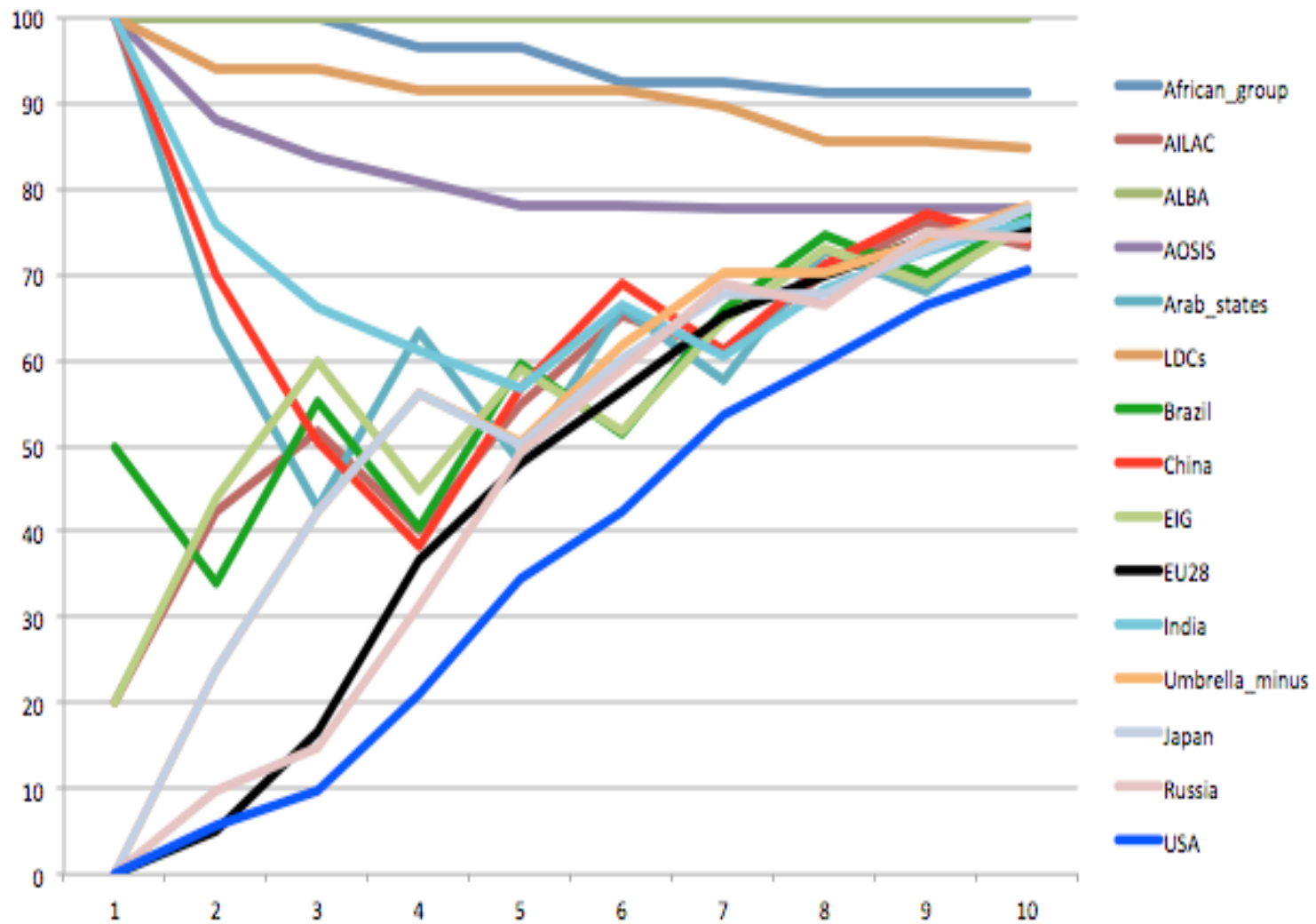
- Game ends in R 1 at scale point 60 [48, 73].
- Should expect that more than a collective, non-binding provision is forthcoming, most likely including at least some countries offering non-binding commitments.
- Russia and the USA should be particularly displeased; holds also for most developing country groups, *excl.* Brazil, China, and India.

What will the size of agreed finance volume to be mobilized (private and public) by 2030 (per annum)?



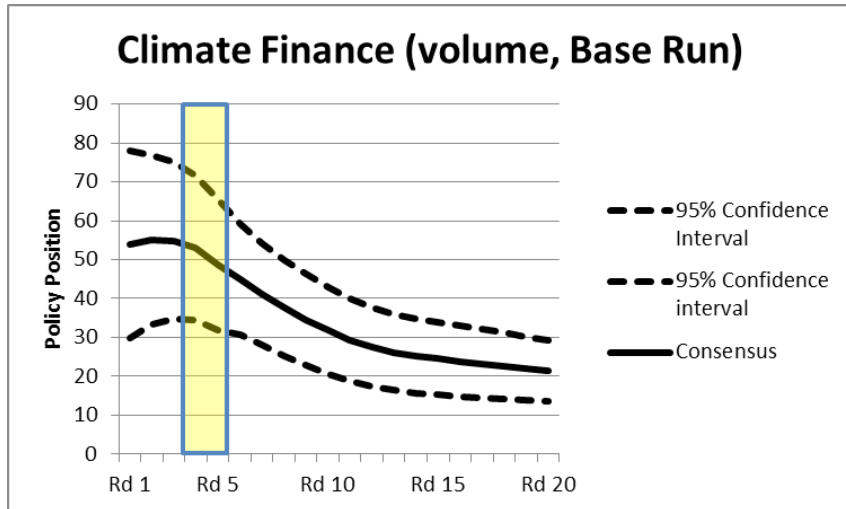


Issue 6: Finance volume



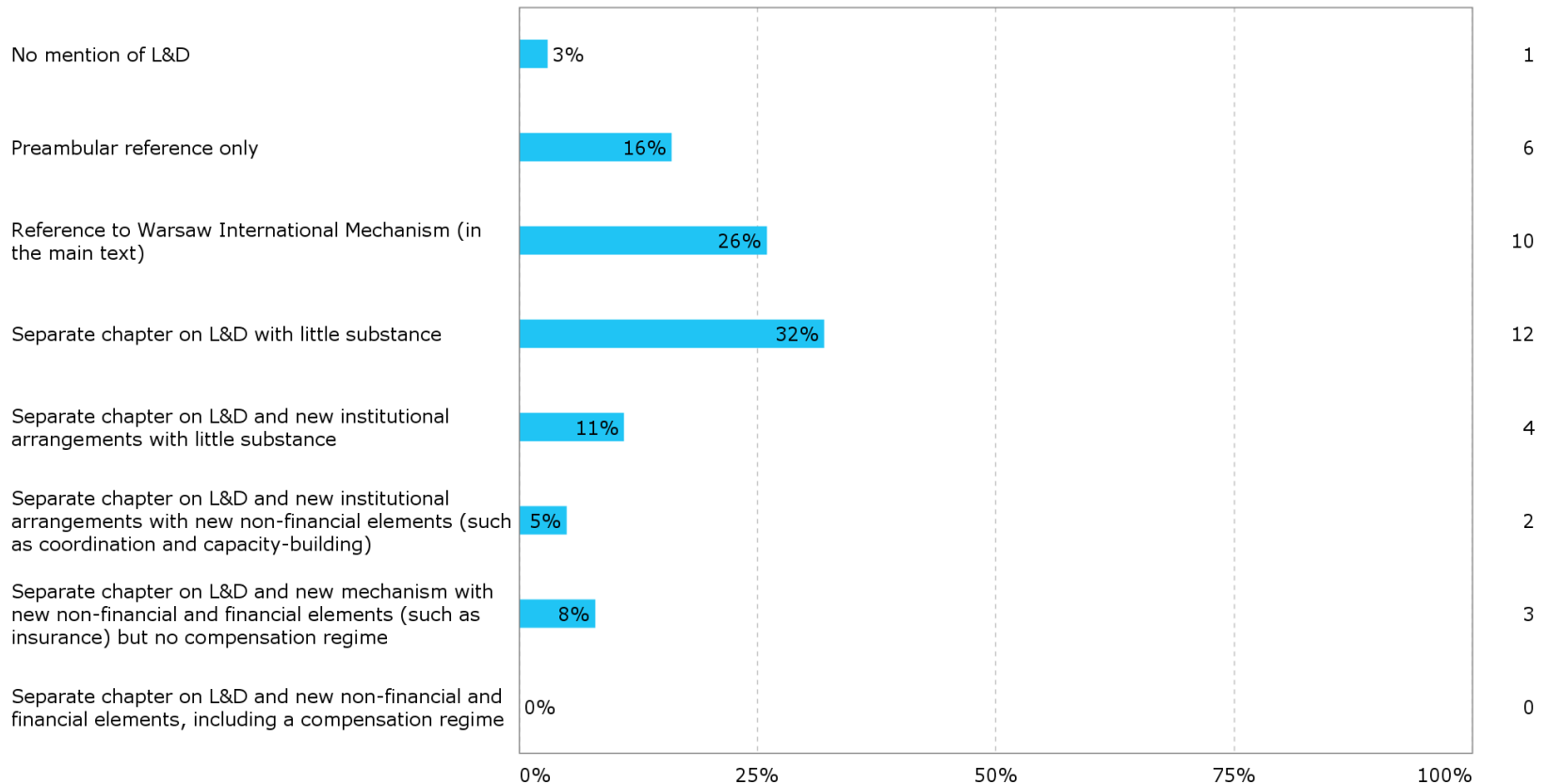
The Exchange Model's Forecasts on the Development of Stakeholders' Positions on the Issue of Finance Volume

Climate Finance - Volume



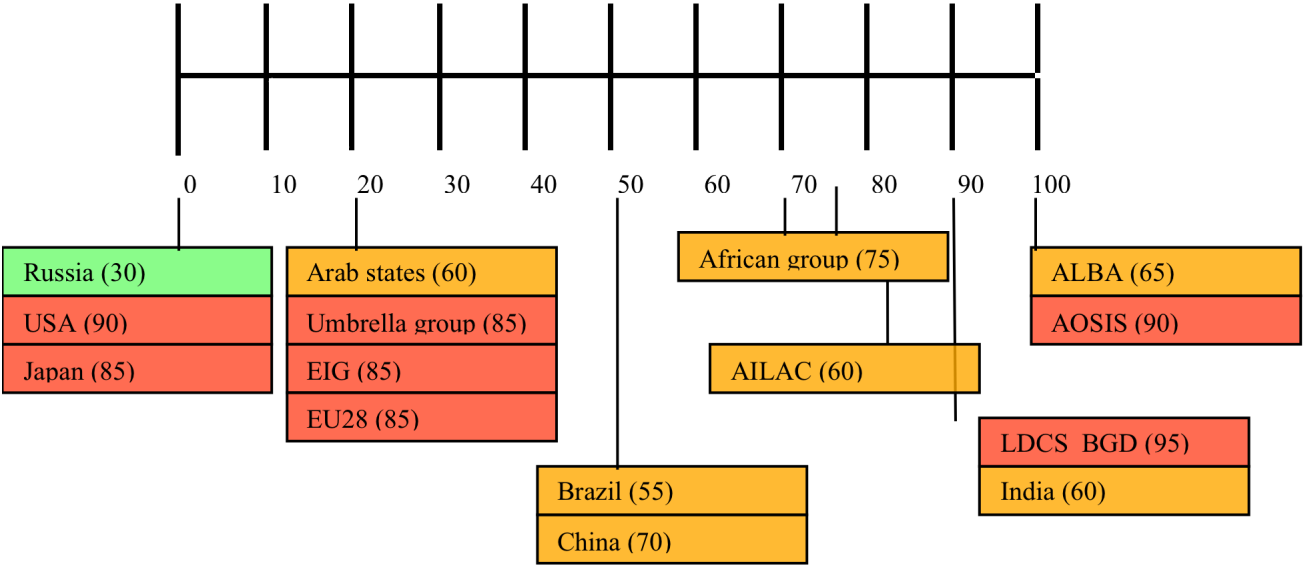
- Game ends in R 3 at scale point 55 [35, 75].
- The smoothed mean implies a considerable upgrading by developed countries *above* \$ 100 b/year from public and private sources.
- The confidence interval is comparatively wide, including amounts in the range of ca. \$ 175b - \$ 375b p.a.
- All industrialized countries stay below the 95% CI; this could imply that they will use a veto as they are the likely major financiers of climate finance and remain “unhappy”.

To which degree will loss & damage (L&D) be included in the agreement?

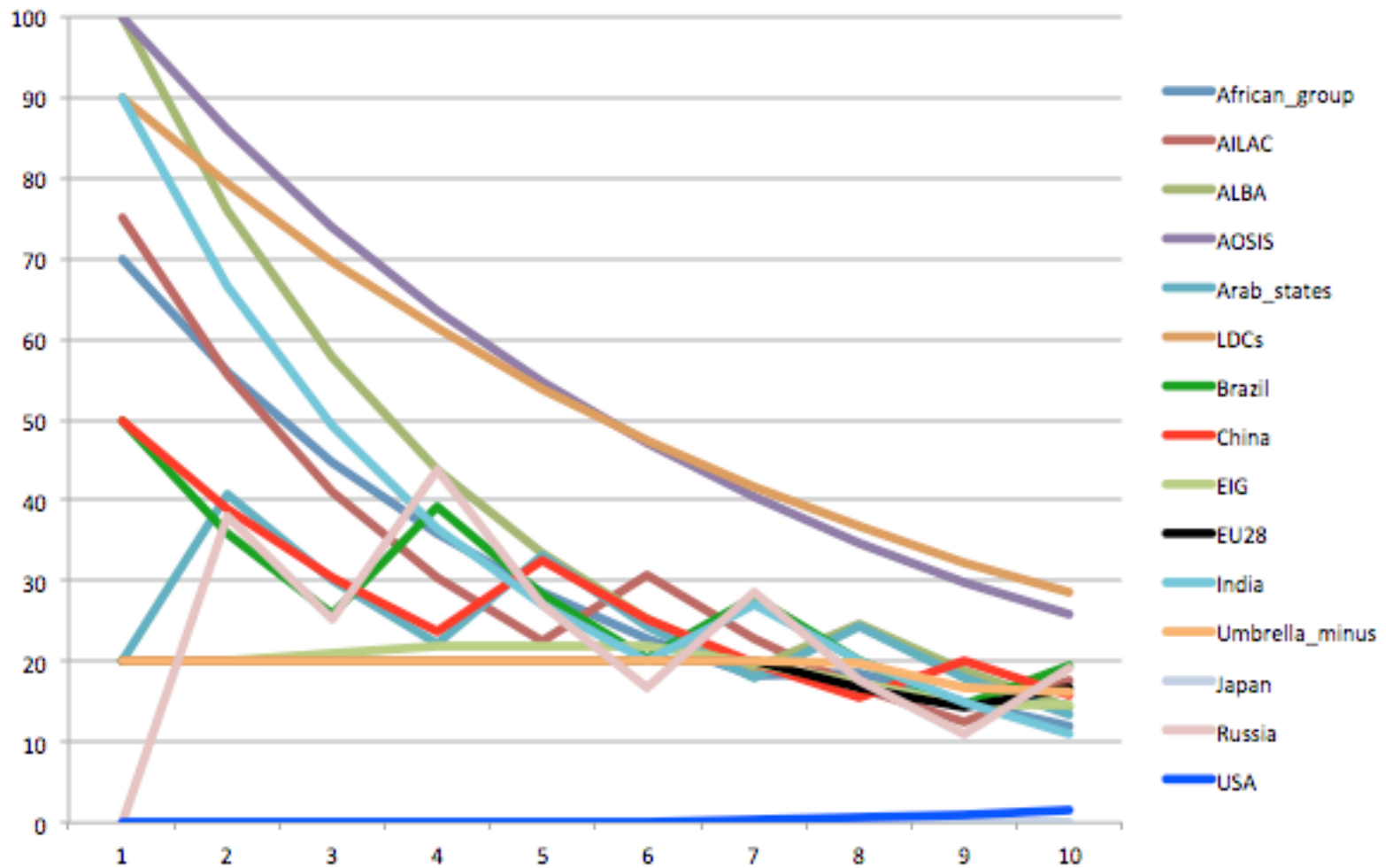


No mention /omission
of L&D

separate chapter L&D, new non-
financial and financial elements,
including a compensation regime

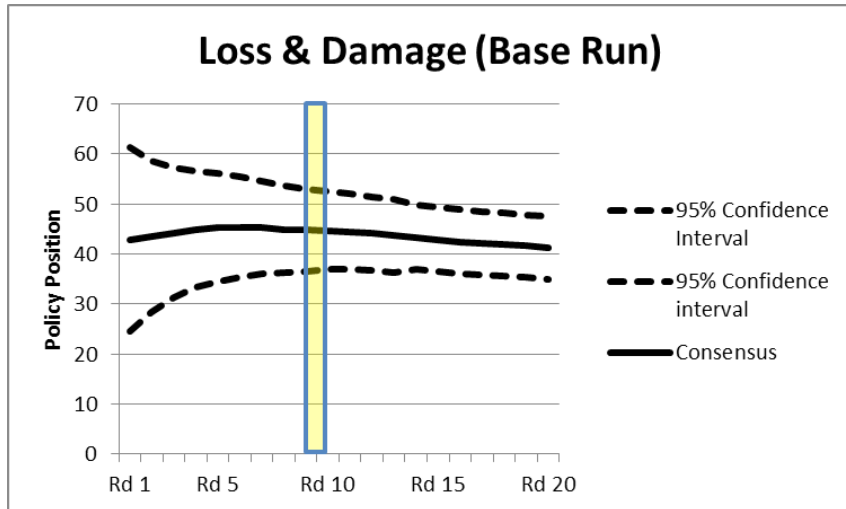


Issue 9: Loss and damage



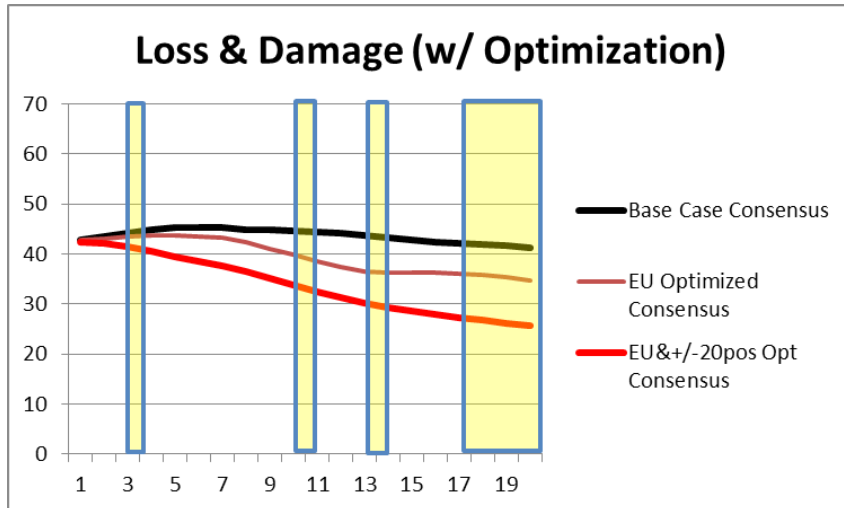
The Exchange Model's Forecasts on the Development of Stakeholders' Positions on the Issue of Loss and Damage

Loss & Damages



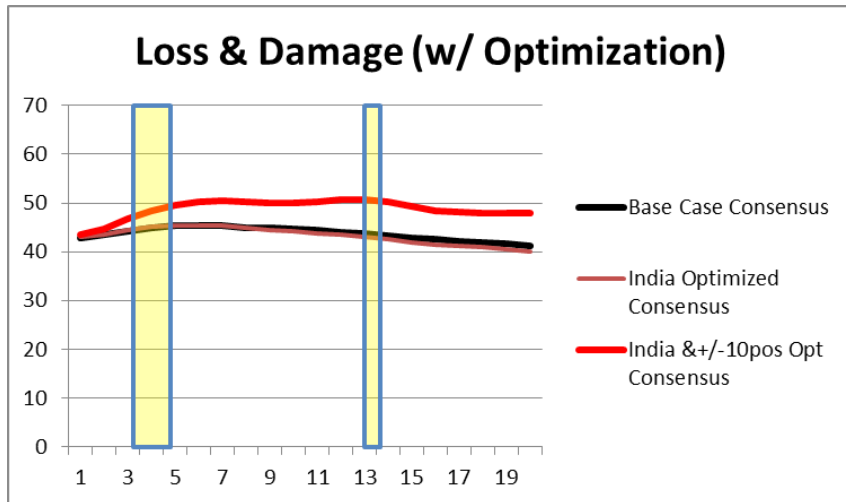
- Negotiations end in R 9 (well "beyond Paris") at scale point 45 [37,53].
- Compared to the status quo (20), the smoothed mean at 45 indicates that we should expect at least a separate chapter on L&D with new institutional arrangements, yet with little additional obligations.
- The 95% confidence interval indicates departure from the status quo and some probability that non-financial elements might be included.
- Many developing countries (ALBA, AILAC, AOSIS, Bangladesh, and India) quickly make concessions and move to the predicted outcome, with the exception of China and Brazil (which are originally positioned reasonably close to the ultimate outcome).
- The EU moves into the direction of the consensus, yet Japan, Russia, and the USA hold positions in round 9 substantially different from the consensus.

Loss & Damages



- Optimizing for the EU28 leads to two end points: in R3 and R10, both of which are similar to the results of the Base Run.
- If optimized for the EU28 and actors +/- 20 points (essentially all industrialized countries plus the Arab countries), a substantial improvement of 10 points over the base run is reached if negotiations stop in Round 10 as compared to the Base Run.

Loss & Damages



- India only optimized run ends in R 3 with barely a difference over the base run in positions, yet faster convergence. Japan, Russia, and the USA hold positions in round 3 substantially different from the consensus.
- If optimized for India +/- 10 points on the position scale (comprising ALBA, AOSIS, India, and Indonesia), this results in an equilibrium in R 3, and shows that the group of countries try to pull the equilibrium into the opposite direction as compared with the EU28 optimization.

Conclusions

- Agreement Across Approaches?
 - correlations (Pearson r)

	Expert Survey - Mean	Exchange Model - Mean	Predictioneer's Game - Mean
Expert Survey	1.00	-0.18	0.12
Exchange Model	-0.18	1.00	0.65
Predictioneer's Game	0.12	0.65	1.00

Explaining Differences in the ES, EM, and PG Predictions

- The Exchange Model is the sole model that links issues.
- Linking implies that actors use issues as supply issues when they have relative low saliences on such issues.

EM is likely to predict more extreme outcomes than ES and the PG model on issues with a skewed, one-sided salience distribution.

Conclusions

- Issues With *Least* Agreement
(based on PG [95% CI], Expert Survey [any value], Exchange Model [mean])
 - climate finance - volume
 - loss & damage
- Issues With *Highest* Agreement (see above)
 - mitigation – MRV & compliance
 - mitigation – legal form
 - adaptation – institutions
 - adaptation-reserved finance
 - ambition level – mitigation mechanism

Publications

- Sources

- CICERO:

- http://www.researchgate.net/publication/282974577_Predicting_Paris_-_Forecasting_key_outcomes_from_COP_21_using_an_expert_survey

- Exchange Model:

- http://www.researchgate.net/publication/282974338_Forecasting_the_Paris_2015_UNFCCC_Negotiations._The_Exchange_Model's_Analysis_of_Developments_and_Potential_Obstacles_to_Reaching_an_Agreement

- Predictioneer's Game:

- http://www.researchgate.net/publication/282974577_Predicting_Paris_-_Forecasting_key_outcomes_from_COP_21_using_an_expert_survey